

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 386. - VOL. XIII.]

London : SATURDAY, JANUARY 14, 1843.

[PRICE 6D.

MAESTEG IRON-WORKS AND MARGAM TIN PLATE WORKS, Glamorganshire.—These two important works, now in actual operation, will be OFFERED FOR SALE, BY AUCTION (unless in the mean time disposed of by private contract), in the month of February next. The Margam Works consist of TWO BLAST FURNACES, with STEAM-ENGINE, of 5-horse power, have an ample supply of IRON ORE and COAL, extending under 500 acres of land.—The Margam Tin Plate Works are adapted to the make of 600 BOXES TIN PLATES per week; the water-power is considerable; the whole of the machinery is in good working order. The present machinery is applicable also to the ROLLING of METALS of every description.

Full particulars, and due notice, will be given of the time and place of sale; meantime the works may be viewed, and any information respecting them obtained, on application to Mr. David Rowland, solicitor, White Lion-court, Cornhill, London, and Mr. William Llewellyn, solicitor, Neath.

IMPORTANT SALE OF MACHINERY, TWO VALUABLE AND POWERFUL MARINE ENGINES, SHIP STORES, &c. CLARENCE DUCK, by Messrs. WINSTANLEY and SONS, on Monday, the 22d inst., and following days, at Eleven o'clock precisely each day, on the premises, Williams-street, Clarence Dock, the WHOLE of the VALUABLE and EXCELLENT MACHINERY, TOOLS, REMAINING STOCK IN TRADE, STORES, &c., the property of the ST. GEORGE STEAM-PACKET COMPANY, who are giving up their own repairs.—The MACHINERY and TOOLS consist of a 4-horse BEAM-ENGINE, with boiler, &c.; a PLANING MACHINE, with 8-foot bed; a SLIDE LATHE, with 2 ft. 6 in. face-plate; two smaller LATHES, with iron beds; valuable SLIDE REST, excellent DRILLING MACHINE, a DOUBLE-GEARED SCREWING MACHINE, a SINGLE GEARED DITTO, two large and powerful PUNCHING PRESSES, with taps and dies; a rivet and plate-furnace, a large new double-geared crane, two smithy cranes, a great variety of excellent smithy and boiler-makers' tools, smiths' and boiler-makers' hearths, smithy bellows, valuable blowing machine, with pipes, valves, &c., six crab winches, of various powers, and chains, hydraulic pump, double-acting force pump, a quantity of viscous, a large assortment of mandrels and various iron-ware, and savage blocks; twelve water troughs, four portable fire-hearth, four iron wrought-iron water tanks and piping, a weighing machine complete, several scale houses and weights, large gritstone, and other articles and utensils suitable for ironfounders, &c.

The STOCK and STORES comprise a large quantity of bar-iron of different descriptions, blister, cast, and spring steel, new rivets, a valuable assortment of new files, new hardware in locks, bolts, hinges, patent deck lights, muskets, pistols, and cutlasses, ship and cabin stores, a quantity of light canvas, sailmakers' and other needles, thimbles, some new and second-hand plated articles, a great number of second-hand blankets and sheets, hair mattresses and cushions.

At the same time will be sold TWO VALUABLE MARINE-ENGINES—one of two seventy-five, and one of two fifty-five horse power, complete.

The whole to be viewed on Thursday, the 18th, Friday, the 19th, and Saturday, the 21st January next, when catalogues may be had on the premises, and of Messrs. Thomas Winstanley and Sons, Church-street.

VALUABLE FREEHOLD ESTATE AND MINING PROPERTY, situated in the immediate vicinity of the Hon. Edward Mostyn Lloyd Mostyn's highly productive lead mines, in Flintshire.—TO BE SOLD, BY AUCTION, at the Dolphin Arms Hotel, in the town of Mold, in the county of Flint, on the 18th day of January, 1843, between the hours of Two and Four o'clock, in the afternoon, subject to the conditions which will be then and there produced, unless previously disposed of by private contract, of which due notice will be given, all that MESSUAGE, TENEMENT, FARM, and LANDS, with the appurtenances, called COEDMAWR, otherwise PANTY MWYN, in the parish of Mold, in the county of Flint, now in the holding of Thomas Roberts, containing, by advertisement, 27 acres 2 rods and 34 perches (to the same more or less). This valuable and productive estate joins the far-famed mining districts on the Hon. Edward Mostyn Lloyd Mostyn's property, the highly lucrative nature of which is too well known and appreciated to need any lengthy comment. The farm is replete with all the requisite conveniences to ensure every necessary comfort, and the capabilities and richness of the soil tend to render the property one of the most eligible and secure seats for the investment of capital in the country.

The tenant will show the premises, and for further particulars apply to Mr. E. Rumsey Williams, solicitor, Carnarvon.

FOR SALE, by PRIVATE CONTRACT, on the ROSEWALL-HILL MINE, one and a half mile from St. Ives, in Cornwall, THREE STEAM-ENGINES, all new, only three years ago: No. 1, a 36-inch cylinder PUMPING-ENGINE, 8-foot stroke in the cylinder and 7-foot in the pump, with all wood work complete, including doors and windows and first piece of connection-rod; No. 2, a STAMPING-ENGINE, on Sims's combined cylinder principle—4-horse power. The consumption of coal with this engine never exceeded 74 lbs. per horse power per hour; No. 3, a WINDING-ENGINE, 26-inch, double power, Boulton and Watt engine—8-foot stroke, with winding apparatus (iron) complete. The whole of these engines are on the most modern construction, made of the best material and workmanship; are only one and a half mile from a good shipping port, and may be had very cheap.—Application to be made to Mr. Nicholas Tredinnick, of Camborne, or Mr. James Sims, engineer, at Redruth; or to Mr. English, 26, Fleet-street, London. Redruth, Dec. 8.

TO ENGINEERS, IRONFOUNDERS, and MILLWRIGHTS.—The MANAGING and ACTING PARTNER in an established firm in the North of Scotland is about to RETIRE, and a PERSON, fully qualified to act as MANAGER, in his place, is REQUIRED.—To a person of experience in carrying on the above trades (or who is now carrying them on in his own account), a preference will be given. The most ample testimonials of qualification and fitness for the situation will be required, together with satisfactory security for the faithful performance of the duties to be undertaken. With a view to induce properly qualified persons to come forward, a LIBERAL SALARY WILL, in the first instance, BE GIVEN, and afterwards, upon the advertizers' being satisfied with the management, ability, and industry of the manager, they will ASSIGN him, as a partner, a SUITABLE SHARE, or INTEREST, in the WORKS. The present offer, therefore, an opportunity, seldom to be met with, of obtaining satisfactory employment, and of forming a permanent respectable connection, the chief object of the advertizers being to secure for their management the services of a properly qualified and meritorious person. The advertizers' beg to request that no one will answer this advertisement whose testimony, &c., will not fully come up to those required by them.—Application to be made by letter, post paid, to "X. Y. Z." Box No. 500, Post-office, Manchester, or to "X. Y. Z." 12, Arundel-street, Strand, London.

MACHINERY ON SALE.—ON SALE, a QUANTITY of MACHINERY, of various descriptions, lately used in the preparing and spinning of flax and tow at a mill in St. Helens, Lancashire. It has lately been cleaned and set up, in a warehouse belonging to Mr. Thomas Kidd, self-crown manufacturer, the owner, in Widnes, near Warrington, for the convenience of sale, and is on daily view. It is in good condition, and will be sold on reasonable terms.—The spinning mill, with a steam engine, of 8-horse power, is also on sale.

Widnes, Dec. 22.

LORD ASHLEY'S BILL.—At a MEETING of the SOUTH STAFFORDSHIRE IRON TRADE, held for general purposes, at Croxlett's Hotel, Handsworth, the 19th of September, 1842.

MICHAEL GRAEBROOK, Esq., in the chair.

The deputation appointed to watch the proceedings on Lord ASHLEY'S BILL FOR REGULATING THE EMPLOYMENT IN MINES AND COLLIERIES, having reported to the meeting that the ALTERATIONS PROPOSED in this BILL, as important to the interests of the trade, were SUCCESSFULLY ESTABLISHED, and that the satisfactory issue of their motions was mainly owing to the active and efficient co-operation and assistance of Lord Hatherope.

It was unanimously resolved—that the meeting, fully sensible of the valuable and friendly services which his Lordship has rendered to the mining interests of Staffordshire on this important occasion, respectfully request his acceptance of its best thanks, heartily indorsed by each firm of the coal and iron trade, with the assurance of their lively and gratifying recollection of his Lordship's vigil attention to their interests during the long period of his representation of the county in the House of Commons.

(Signed by 144 firms, including all the proprietors or lessees of mines in South Staffordshire.)

The following reply has since been received from Lord Hatherope:—

"Tringdon Dec. 28, 1842.

"My DEAR Sirs.—I am greatly indebted to the proprietors indicated in the coal and iron trades in South Staffordshire for the kind and flattering expression of their feelings, communicated to me in the resolution which you have placed in my hands. The merit of remodelling Lord ASHLEY'S BILL belonged to the deputations which, at the shortest notice, came to town to oppose it, but more especially to the South Staffordshire deputation—viz., Mr. Foster, Mr. Mathewson, Mr. Richard Smith, and Mr. Spofforth. Great was the disadvantage attending with such a committee, after it had received the sanction of the House of Commons. None who practitioners are used to impressing the convictions of their extensive experience on the deepest, most subtle minds of the people. Individually, I claim no other merit than that of having remodelling their efforts. I am satisfied that all the parties through whom agency the Bill was in material modified, consulted the best interests of the miners and their families.—I beg, therefore, to assure the proprietors who signed the resolution, that I am exceedingly gratified by the terms in which they are pleased to speak of my sincere endeavours to serve them, on all occasions during the long period when I had the honour and pleasure to represent them in the House of Commons; and I retain the most pleasing recollection of their mutual welfare during the whole of that period, and that my desire to be useful to them individually and collectively has suffered no abatement by my removal to the House of Lords.

Yours, &c., Michael Greenbrook, Esq.

"HATHEROP.

FOR SALE, SIX LOCOMOTIVE ENGINES, well worthy the attention of Railway Companies. Contractors for Earth Cutting, or Coal Owners.—For particulars apply to Timothy Hackworth, Soho Engine-Works, Shifnal, Shropshire.—Dec. 26.

CORNWALL.—A MOST VALUABLE INVESTMENT.—TO BE SOLD, OR LET, for a term of twenty-one years, the RIGHT to ONE-FOURTH PART of all the TIN and TIN-WORKS in and throughout the estate of Trelowarren, in the parish of Lanivet, in the county of Cornwall. In one part of the estate of Trelowarren there is at present a very rich and valuable Tin Mine, now in the course of working, at a very considerable profit, but the persons working the same have no right or grant of the part now offered for sale.—For treating for the above, application may be made to Miss Susan Hemwood, Rosemary-row, Truro, or to Messrs. Paynter and Whifford, solicitors, St. Columb.—Dec. 26.

LEAD MINES.—TO BE LET, for a term of years, and entered on the 1st of March next, the well known HURST LEAD MINE, in the North Riding of Yorkshire. The Hurst Mines form an important portion of the celebrated mining district of Wensleydale and Arkendale. The veins are a continuation of those of the A.D. and C.R. Mines, and are now in full work. The average produce, during the last sixteen years, has been 6000 pigs per annum, or an average of 90,000 lbs. The iron, wood, and implements may be taken at a fair valuation.

Further particulars may be known on application to Francis Morley, Esq., Marick park; John Harland, Esq., Marrick; or Mr. Thomas Birkhouse, the agent at the mine.—Jan. 10.

FOR SALE, BY CONTRACT, ONE SHARE, or ONE HUNDREDTH PART, in GOGINAN MINE, in Cardiganshire.—This is one of the richest mines in the Principality; it is situated seven miles from the shipping port and watering place of Aberystwyth. The profits are considerable, with every prospect of their being increased, the ore ground is nearly a quarter of a mile in length, and every fathom that has been taken away has yielded upwards of 6000 worth of silver and lead, and there is now drained, at twenty fathoms under the adit, upwards of 100,000 weight of ore.—The returns for the present year have been 200 tons per month.—Applications for price to be made to the Editor of this Journal, Fleet-street, London.

FOR SALE, TWO ONE-HUNDREDTH SHARES, in the GOGERDDAN MINES, comprising the Bog Mine, Darren, and Cwmsymond, the celebrated mine from which Sir Hugh Middleton made immense profits. The present workings have just reached about ten fathoms under the old mine, which is very extensive, and promise to hold out of immediate profit.—Application to Mr. English, 26, Fleet-street, London.

TO BE SOLD, CHEAP, TWO very COMPLETE SETS of HOT-BLAST PIPES.—Apply to the Yatalyfera Iron Company.

SHARES IN CORNISH AND OTHER MINES BOUGHT, SOLD, or EXCHANGED, on COMMISSION; Mines inspected by first-rate practical miners; specimens of the ores of the various mines to be seen, and every information given, on application to William Treverry, jun. (from Redruth, Cornwall), at his office, 50, Threadneedle-street, London.

N.B.—A quantity of Black Jack for sale.

ANGLO-MEXICAN MINT COMPANY.—At a Special General Meeting of the proprietors of this company, held this day, at the company's office, JOHN SCHNEIDER, Esq., in the chair, the directors announced, that, in consequence of their having entered into a contract with the Government of Mexico for working the Mint of Zacatecas for a term of fourteen years, they had, agreeably to the power vested in them, determined on the CREATION of TEN THOUSAND HALF SHARES in the said company, of 45 each, the same to be appropriated preferably to the proprietors of the said company.—The terms on which the said half shares are created may be learnt on application at the company's office, where forms of application may be obtained. Proprietors desirous of applying for their proportion are to send to send to their application to the company's office, 3, New Broad-street, on or before the 10th inst. G. H. LONSDALE, Secretary.

BRITISH IRON COMPANY.—Notice is hereby given, that the REMAINING INSTALMENT, amounting to £46,410, of the PROMISSORY NOTES for £200,470, ISSUED by the BRITISH IRON COMPANY in the year 1838, PAYABLE on the 20th JANUARY next, will be PAID, with interest, on THAT DAY, at the office of the company, 3, New Broad-street, and on every subsequent Tuesday, Thursday, and Saturday, between the hours of Twelve and Four o'clock.—The Notes, with a list of them, signed by the holders, must be left for examination one clear day previously to application for payment.

COMBOMARTIN AND NORTH DEVON LEAD & SILVER MINING COMPANY.—The directors have the pleasure to inform the shareholders that they have declared a DIVIDEND of ONE POUND per share, to be paid at the counting-house, on the mine, on the 1st day of February next, and following days. Persons attending either for themselves or friends will be kind enough to be prepared with the Numbers on the strip they apply for.

WILLIAM NEWTON, Secretary.

CONSOLIDATED COPPER MINES OF COBRE ASSOCIATION.—Notice is hereby given, that a HALF-YEARLY GENERAL MEETING of the proprietors of this association will be held, in conformity with the Dead of Settlement, at the office of the company, 26, Austin-street, on Tuesday, the 1st inst., at One o'clock precisely.—On that day two directors—namely, Robert Passenger, Esq., and George Probyn, Esq., and one auditor, Walter Shair, Esq., will go out of office by rotation, agreeably to the Dead of Settlement, but are immediately re-eligible, and are candidates for re-election.—It is necessary that parties intending to offer themselves as candidates for the direction and auditorship should leave notice of such their intention with the secretary, at the office of the company, 26, Austin-street, at least fourteen clear days before the day of election.

By order of the court of directors.

WILLIAM ECKSTEIN, Secretary.

INDUSTRY—ECONOMY—PERSEVERANCE.—The board of directors of the Mining Company of Ireland hereby give notice, that a DIVIDEND of THREE POUNDS NINE SHILLINGS per share, declared this day, will be PAID at the office of the company, 36, Broad-street buildings, on and after Thursday, the 19th inst., at the rate of 12½ per cent. upon the company's deposited capital stock, for the half year ended 30th November last, being EIGHT SHILLINGS and NINE PENCE per share, will be payable on and after the 1st of February next, at the company's office, 27, Lower Ormond-quay.—The books for transacting will be closed from the 2d inst. to the 1st February.

By order,

RICHARD FURDY, Secretary.

ROYAL SANTIAGO MINING COMPANY.—The directors hereby give notice, that the SIX MONTHS DIVIDEND of THREE POUNDS NINE SHILLINGS per share, declared this day, will be PAID at the office of the company, 36, Broad-street buildings, on and after Thursday, the 19th inst.—The proprietors are requested to leave their dividend warrants two clear days before the day of payment.—Jan. 4.

WILLIAM NEWTON, Secretary.

TINCROFT MINING COMPANY.—Notice is hereby given, that a DIVIDEND (being the third) of TEN SHILLINGS per share has been declared by the directors of this company, and that the same will become PAYABLE to the shareholders on the 27th inst. and following days, at 41, Finsbury-square, London, between the hours of Eleven and One o'clock.—Jan. 12.

THE "HINDOSTAN" STEAM-SHIP AND H.M. FRIGATE "PEELFORD".—The two above-named grand steam-ships are entirely fitted with ANDREW SMITH'S PATENT WIRE ROPE for their Standing Rigging; thus demonstrating that practical experience is daily and progressively establishing its superiority over all other Standing Rigging. For all mining and other purposes it is already proved to be the best and most serviceable description of rope, especially hawser and chain. For further particulars, address Mr. Andrew Smith, 2, White Lion-court, Cornhill, London.

SEYSEL ASPHALTE—CLARIDGE'S PATENT.—Patented by all the principal Architects and Builders in this country and abroad.—This ASPHALTE is a mineralous substance, obtained from a limestone vein at Pyrmont, in the Jura Mountains. In consequence of the daily attempts made to imitate this valuable mineral production, by the means of gas and other fuels, chalk and sand, &c., which comprehend the name of "Asphalt," "Asphalte," "Bitumen," &c. As a proof of the great durability of the GENUINE ASPHALTE, it must only be mentioned, that the best work executed in this country with this material (amounting to 1000 feet) was at Wimborne, opposite the Stone Quay, in the month of April, 1838, and which, although only half an inch in thickness, has remained, up to this time, a period of four years and eight months, in the most perfect condition.—Books of testimoniis, with maps of areas, may be obtained on application to Mr. George Aspinwall, 1, Newgate-street, London.

Mr. George Aspinwall, 1, Newgate-street, London.

—Hence the present the proprietors of Parliament-street, London, and the works of the Metal Works, at the Albany-park Cemetery (which, from its nature, has since been removed), or at the Head, of the Rough-Stones of the Great Western Railway, were constructed by this company.

—I remain, my dear Sir, cordially yours,

"CLARIDGE,

LONDON AND GREENWICH RAILWAY COMPANY.—

HALF-YEARLY GENERAL MEETING.—Notice is hereby given, that a HALF-YEARLY GENERAL MEETING of the proprietors of this company will be held at the London Tavern on Tuesday, the 1st January inst., at Twelve o'clock precisely.—The following gentlemen, voted from the direction by rotation, agreeably to the Act of Parliament—viz., Josiah Wilson, Esq., A. E. Thompson, Esq., and W. Hughes Hughes, Esq., not being eligible for re-election, will be voted for themselves accordingly.—The Transverse Books will be closed on Monday, the 10th Inst., and received on Wednesday, the 1st of February next.

By order of the board.

Offices, 27, Canterbury-square, Southwark, Jan. 18.

J. Y. AKERMAN, Secy.

RAILWAY, ASHTON-UNDER-LYNE, & MANCHESTER RAILWAY.—CONTRACT FOR TUNNEL WORKS.—The directors of the company are prepared to RECEIVE TENDERS for the COMPLETION of a POSITION of the SUMMIT TUNNEL, situated between Wensleydale and Dentdale, on the above line of railway.—Plans, sections, specifications, and draft forms of contract may be seen at the railway office, 18, Piccadilly, Manchester, on and after Monday, the 10th inst.—Every facility will be given to parties wishing to inspect the shafts and driftways previous to tendering; and Mr. Purdon, the assistant engineer of the company, will be in attendance on the works to accompany contractors and others, and will give all the necessary information respecting the works through which the driftways have been formed.

Sealed tenders, addressed to the secretary, to be sent to the North Arms Hotel, Glosop, at or before Twelve o'clock on the morning of Wednesday, the 10th January next, after which time no tender will be received.

Printed forms of tender may be obtained on application to the secretary, and no tender will be attended to.

The directors will not consider tenders lower than the lowest offer.—Parties tendering, or some other person duly authorized by them, will be required to be in attendance at Glosop on the above day of bidding.

Manchester, Dec. 14.

By order, JOHN PLATTARD, Secretary.

BANKS'S PATENT.—TO RAILWAY DIRECTORS AND ENGINEERS.—T. BANKS has great pleasure in announcing that, by the APPLICATION of his PATENT IMPROVEMENT to the REPAIRS of TIRES of CARRIAGE and ENGINE-WHEELS, a WORKING SURFACE is restored, of several times greater durability than any before used.—The testimonials already received of the efficiency and economy of this plan are too numerous to be placed in an advertisement.

LICENCES will be granted to Railway Companies, or other valuable parties.

For further particulars, address T. Banks, engineer, Bengal-street, Manchester, N.B.—Patents are obtained for foreign countries, as well as for Great Britain and Ireland.

ANTHRACITE IRON.—CRANE'S PATENT.—

TERMS FOR LICENCES FOR SMELTING IRON, BY THE COMBINATION OF ANTHRACITE AND HEATED AIR, MAY BE HAD BY APPLICATION TO THE SOLICITORS OF THE PATENTEE, MESSRS. WATKINS AND HOOPER, 11, SACKVILLE-STREET, LONDON.

By the use of this process, it is believed that the whole of the veins of anthracite in the Welsch Basin, amounting in the aggregate to 64 feet in thickness, are applicable to the purpose; all those above, and including the veins being nearly 40 feet of the whole, have been successfully used by the Yatalyfera Iron Works, near Swansea.

LAW INTELLIGENCE.

INFRINGEMENT OF PATENT—ANDREW SMITH'S WIRE ROPE.

ROLLS' COURT—JAN. 6.

THE QUEEN v. NEWALL.—This was an application made by the defendant to strike out several of the pieces in the plaintiff's declaration, which were declared to be impertinent repetitions, and not at all connected with the case. It was argued, on the part of the plaintiff, that the Master of the Rolls had no power to strike out parts, there being no precedent; and further that the pieces so desired to be struck out were not repetitions, but of the most vital importance to the case. The Master of the Rolls stated that he would submit the cause to the law Judges upon the point raised, and make known his determination to the parties. [We are enabled to state, on authority, that the Master of the Rolls has, since the hearing, declared that the pieces, as put in by the plaintiff, must stand, and that the application made has been refused. Mr. Hindmarsh appeared on behalf of the Crown.]

RESPONSIBILITY OF CLERGYMEN IN CONNECTION WITH JOINT-STOCK COMPANIES.

EX PARTE SALFORD, CLEENE, RE O'NEIL AND OTHERS.—Mr. Swanton (with whom was Mr. Bacon) appeared in support of this petition, which impeached the validity of the *Act*. There were three persons, of whom the petitioner was one, who were engaged in certain mining transactions in Gloucestershire, but not constituting a trading company, the fact having issued before the last *Act* of Parliament, which has much extended the law on that point. In 1829 the parties in question became lessees of iron, stone, and coal mines; but were by the terms of their lease restrained from creating particular offensive works, in consequence of the proximity of a mansion-house. The works in the colliery and iron mine occasioned a demand for the use of implements of cast iron, for the purpose of carrying on the operation of smelting in an adjacent parish. In order to supply these articles a foundry was erected, and the proprietors, being unable to smelt their own ore, were obliged to buy pig-iron to be converted into articles of use. Several neighbouring parishes at the time to what some cast iron, and some was sold to them, not from ore raised by the firm, but from what they had themselves purchased for manufacture. This, it was apprehended, could not be held to constitute a trading, as the acts done were not with a view to obtain a livelihood thereby, but merely incidental to arrangements for procuring their own produce and making the same disposable. The petitioner, who had an unfortunately joined in these unfavourable speculations, was a beneficed clergyman, and, under Lord Stowell's *Act*, his trading was illegal, and the contracts not binding. It was held on well-known cases relating to joint-stock banks that contracts were vitiated in similar circumstances, and the law was altered subsequently so far as related to the liabilities of joint-stock banks; but it would be for the other side to show that the exceptions then introduced could cover the case of a private trading partnership. The **CHIEF JUDGE** observed, the *Act* alluded to did not appear to limit its operation to joint-stock companies, whether banks or otherwise, and added, that if it had done so he should have felt some difficulty in defining what did or did not constitute a joint-stock company. The vitiation of contracts by the reason alleged was not apparent, as the statute known as Lord Stowell's *Act* appeared to be repealed. —Mr. Swanton proceeded to contend that whatever had been done which bears any appearance of trading had been merely incidental to the working of the mines and manufacture of pig-iron, and not constituting a trade, as described by Lord Lyndhurst in "Ex parte Burgess," and by the Court of Queen's Bench in "Hind v. Rogers." The only question was as to the extent of the dealing at the foundry, relative to which it was to be borne in mind that until January, 1821, the parties were unable to smelt their own ore, and that subsequent to that date it was admitted no purchases were made. Another point raised had no better foundation, as it appeared the parties had contracted for the supply of a certain quantity of coal, and had purchased a portion from others in consequence of their being unable themselves to raise the given quantity within the specified time. The debt due to the banking firm who had stood out the *Act* was not complete until April, 1841, and the trading, if indeed any had ever been carried on, ceased in the January previous, when the smelting commenced.

Mr. Russell and Mr. Anderson, in support of the *Act*, were not heard.

The CHIEF JUDGE said it was not a sufficiently clear case to call for a *reversal*. There had been purchases of large quantities of pig-iron, the manufacture of the same, and sale of considerable portions. The question certainly turned on the nature of the parties; and it was not sufficiently clear that the acts in question ought not to be held to constitute a trading. He was unable, in such a state of circumstances, to supersede, but was willing to give any facilities for the trial of an action thereon. He would therefore ask the counsel for the petitioner if they were prepared to adopt that course?—Mr. Swanton said his client was, he believed, unfortunately not in a condition to take advantage of the course offered.—The **CHIEF JUDGE**: The case is not one on which it would be proper to supersede a *trial*; nor is it such a case as ought at present to be dismissed. Take a week to consider the point; and if the alternative is not accepted, and terms proposed for arranging and trying the action at law, let the petition be dismissed.

HASTINGS AND RYE BRANCH OF THE SOUTH-EASTERN RAILWAY.

This projected line, which is intended to join the South-Eastern at Staplehurst, and in part over the same place, to unite with the proposed Maidstone and Gravesend Railway, at Maidstone—on the importance of which, in conjunction with the French lines, we offer some remarks in an article, headed "Direct Communication between London and Paris by railway," in our Journal of the 24th ult.—now bids fair to be very soon in course of formation. A provisional committee of eleven directors is formed (all gentlemen of the counties of Kent and Sussex), and an honorary secretary appointed. The prospectus just issued states that the works will be completed at a much less cost per mile than any other line in the kingdom, and it is confidently calculated that the maintenance of way will not exceed 30d. or 40d. per mile per annum. The management being in the hands of directors connected with the immediate locality, it is reasonably anticipated that the landholders, confiding in them, will naturally render all the assistance in their power, and this in itself is sufficient guarantee that it will be so constructed as to secure at low charges the traffic of passengers and the transmission of goods, cattle, hops, fish, &c., &c.; and by this circumstance they are in a great measure protected from imposition and extravagant demands in the purchase of the land through which the line will pass. Under these favourable circumstances the directors severely calculate a return of 6s. to 8d. per cent. on the capital invested, quite exclusive of a large portion of continental traffic, which must pass over it, as the readiest communication with this country from Paris, through Boulogne, Montreuil, St. Valery, and Dieppe. To enter at full into all the advantages which this line will offer to the travelling public is more than our space at present will allow; but we will mention one or two of the most important. The saving of expense in a steam-vessel making two trips per week from Rye to the opposite port, as compared with Dover, will be 30d. per annum; a much greater difference between Rye and Dieppe, as compared with Boulogne and Brighton, and a consequent saving of time and expense. The harbour of Rye can, at a very trifling cost, be made of the greatest capacities, and far superior to Dover; this has long been known to engineers and naval men, and has occasioned much astonishment that a harbour with such an immense amount of power should have been so long neglected, when, by the expenditure of a small amount, in comparison with the important advantages certain to be obtained, steam-vessels might enter at all times of tide. Indeed, this, in connection with the present projected railways in France, is of such vast importance, that reference in a map will at once remove all doubt, and prove that this (bearing as it will a portion of the track line in the Continent) will be the most profitable in England in proportion to the capital employed. Arrangements are made that remuneration to the directors will depend on the execution of the works within the estimate. Interest will be paid on instalments from the date of payment of first call, and a deposit of ten shillings per share will be ample for preliminary proceedings to obtain the *Act* of Parliament; but no payment is to be received before the proper plans, calculations, &c., are prepared and laid before the public, as the cost of survey and estimates will be advanced by the directors. We understand that most of them are experienced trustees of turnpike-roads, and, consequently, there will be no difficulty in making out estimates. The journey from London to Rye, by this line, can be performed in six hours, at a charge of 12s., being 10s. for the railway fare from London to Rye, and 2s. by steam-vessel, from Rye to Boulogne; this will enable passengers to avoid a night passage by steam-vessel from London, and many other expenses incurred for subsistence on a journey of twelve or fourteen hours.

West London RAILWAY.—With much pleasure we learn that the whole of the new shares of the West London Railway Company have been subscribed for, and that operations for completing the works are to be resumed without delay. A notice of "call" on the new shares appears in our advertising columns. The infusion of new blood into the management has not been without good effect.—*Building News*.

New Glass.—The glass conservatory at Chatsworth is being glazed with a new description of glass, called "patent flattened crown glass," by means of which, in the ridge and furrow mode of reading, invented by Mr. Pilkington, a great improvement may be made in the construction of various descriptions of buildings. This glass is much thicker than common crown glass, and the pieces may be made forty inches long, at the same cost per pound as ordinary glass.

Minerals in MINERALS.—The beneficial medicinal effects produced by the use of the water of mineral wells is attributed to the presence of bromine, which is found in very minute quantities in all those wells that are at all potable.

PROCEEDINGS OF SCIENTIFIC BODIES.

GEOLOGICAL SOCIETY OF LONDON.

Nov. 30.—Mr. Murchison, President, in the chair.—These papers were read:—1. "On the Bala Limestone," by Mr. Daniel Sharpe, F.G.S.—Notwithstanding the agreement of several of our best geologists, who had published their opinions on the age of the Bala limestone, and had placed it in the upper Cambrian system, Mr. Sharpe was induced to doubt the accuracy of this classification, by observing that every one admitted that the Bala fossils agreed, as far as they had been examined, with those of the lower Silurian beds, and that the attempts to draw a clear line of separation between the lower Silurian and upper Cambrian had failed; but his attention was particularly drawn to the district by Mr. Bowman's observations on Derbyshire, laid before the British Association in 1840 and 1841, and since published in the *xx* volume of the *Transactions of the Geological Society of Mansfield*, which Mr. Sharpe regards as the first indication of the true structure of this part of North Wales. Mr. Bowman classes as upper and lower Silurian many beds before mapped as upper Cambrian, showing that the previous classification of the rocks of North Wales could not be relied upon. He points out, that up to the moment of his taking up the subject, none of the writers upon it had expressed a doubt of the existence of a great thickness of fossiliferous beds below the Corndon sandstone and Llandeilo flags, although it had at last been admitted that these supposed beds could not be distinguished by their fossils from the lower Silurian: and he states that the object of his communication is to show the error of this view as relates to the Bala rocks, which he proposes to prove to be equivalents of the lower Silurian beds, described by Mr. Murchison, and not part of an older series; and he infers, from analogy, that the same will be found in other parts of North Wales which he has not visited, where he conjectures that all the rocks containing shells of lower Silurian species will also prove equivalents of the lower Silurian beds of Siluria. Instead of continuing the Silurian system downwards, through a vast thickness of slate rocks, Mr. Sharpe proposes to strike out one of its original members, regarding the *Corndon sandstone* and *Llandeilo flag* as the same formation, which has received different names according to its mineral character; he observes, in confirmation of this view, that both formations are never found equally developed in the same district, and that the fossils found throughout are too nearly the same to warrant the separation of the lower beds under a separate name. Still Mr. Sharpe believes that there are in Wales, as in Westmorland and Cumberland, vast accumulations of slate rocks below the Silurian system, in which no fossils have been found, and which must retain the name of Cambrian rocks. Mr. Sharpe did not map the district in detail, but he traced two sections, to show the position of the Bala beds with regard to the Berwyns, as he considered the question to turn upon the accuracy or error of the statement of Mr. Murchison—"that the Bala limestone dips under the chief mass of the Berwyns." The first section begins westward, at the igneous chain of Arenig Mawr, crosses the town of Bala, and ends eastward, at the Callettwr, where a dark slate (the upper bed of the Bala series) abuts unconformably against the clay-slate of Moel-Hafod, which is referred to the Cambrian system. This section places the Bala beds in a detached trough, and shows that they do not dip under the Berwyns; but their succession is not well shown, owing to the disturbed state of the surface. The other section is in two parts, from the head of the lake of Bala up the Trawb to Bwlch y Groes and across the Dyb by Dinas Mwdd y and Mairwedd; on the west it begins at the northern prolongation of the igneous chain of Arawn Mwdd, and continues eastward, through a conformable succession of beds up to the upper Silurians; each section shows the whole of the Bala series—the upper bed of blue slate, which on the Callettwr rests unconformably against the Cambrian clay-slate, being the same which is overlaid conformably beyond Mairwedd by an upper Silurian series of soft blue, or liver-coloured, shales, alternating with hard grey grits, without cleavage or fossils, dipping E.S.E.—which Mr. Sharpe identifies with the No. 2 of Mr. Bowman's lower division of the upper Silurian, the probable equivalents of the Wenlock shale. Mr. Sharpe then describes the Bala series of rocks, beginning with the uppermost beds:—1. Dark blue slate; worked at Craig Callettwr, for good roofing-slates and flags. The lower beds pass into a soft argillaceous slate of no value. The whole is not less than 300 or 400 feet in thickness. 2. Upper Bala limestone; a dark blue bed, 10 feet thick, accompanied by calcareous slate and soft brown shale, with many fossils. 3. Hard argillaceous schist, and indurated shale; 400 feet thick, with few fossils. 4. Bala limestone, like No. 2; 30 or 40 feet thick, with calcareous shales and grits, full of organic remains. 5. Grey sandy grits, with a bed 30 or 40 feet thick of impure grey limestone, containing trilobites and other fossils in the lower part; the whole exceeding 500 feet in thickness. 6. Rotten grey clay-slate; supposed to be 500 feet thick. 7. Dark blue slate of poor quality; the lowest bed of the series.—As the Bala beds are quite unconnected with the Cambrian rocks of the Berwyns, and are only overlaid by upper Silurian deposits, as most of their organic remains are known lower Silurian species, and as the total thickness of the whole series is about the same as has been assigned by Mr. Murchison to the lower Silurians, Mr. Sharpe concludes that they are the exact equivalents of the lower Silurian formation, and do not carry the series down below the beds described by Mr. Murchison. Mr. Sharpe considers it as easy to prove their identity with the Corndon sandstone as with the Llandeilo flags, and again endeavours to show that they must be regarded as the same formation under different names. This classification replaces the dark blue limestone of Bala and Coalton on the same parallel from which they were separated when Professor Sedgwick adopted Mr. Murchison's view of the Silurian age of the Coalton limestone, but left the Bala limestone in its erroneous position, as part of the upper Cambrian. The igneous rocks of Arawn and Arawn Mwdd are described by Mr. Sharpe as varying composed of felspar and quartz, and he maintains that this must have been uprooted after the epoch of the Lower Ludlow shale.

3. "Notes on the Discovery of the Remains of Insects in the Lias of Gloucestershire, with some Remarks on the Lower Members of this Formation." By the Rev. P. B. Brodie, F.G.S.—The lower beds of the limestone in which these organic remains occur, are extensively developed in the neighbourhood of Gloucester and Cheltenham, and occupy the greater part of the vale. In the upper part of the lower beds one example only occurred of a fossil insect, being the elytron of a coleopterous insect of the family brachipterid, apparently a species of *ancylodonta*, of *Exocholus*. With this exception, the numerous fossil insects obtained by Mr. Brodie, were found in the bottom part of the lower beds near the base of the lias, which are seen at several points in the neighbourhood of Gloucester. At Wainlodes Cliff, in a grey and blue limestone, termed by Mr. Brodie *limestone*, 20 ft. 2 in. above the base bed, and 6 ft. 2 in. above a hard yellow limestone, containing shells like *Cyclas*, plants and cypris are found, elytra belonging to several genera of coleoptera, a few wings, not unlike the genus *Tipula*, and abdominal segments, apparently of the goat tribe, associated with shells of the genera *Actinia*, *Unia*, and *Monnia*. To the south-west of Coombes-hill, the same limestone contains similar remains in greater abundance, among which are some beetles in a tolerable state of preservation, and in one the eyes are distinctly visible. A few imperfect but large wings of dragon flies also occur. With these are numerous small plants, some resembling mosses, but very different from those in the yellow *Cyclas* limestone, a few seed vessels and leaves of ferns, claws of crabs, and remains of crustacea, resembling the genus *cypris*, from the Solenites shale. Near Gloucester, and in the cliff at Westbury, the same limestone and insects, but scarcer, are found. If the cypris found in these beds be of freshwater origin, it forms a new and highly interesting feature in the history of this deposit. At any rate, the occurrence of the remains of such delicate creatures as insects, many of which are in a beautiful state of preservation, and could not, therefore, have been long subject to the action of the waves, or have been carried far out into the water, gives a greater probability to the supposition that this part of the lias may have been formed in an estuary which received the streams of some neighbouring land, perhaps numerous scattered islands, and which brought down the remains of insects, cypris, and plants above referred to. The shells usually found in the lias limestone are *Actinia* and *Unia*, both of which frequently inhabit estuaries, and are capable of living in brackish water as well as in the open sea. Mr. Brodie has discovered the wing of an insect in the upper lias at Dumbleton, near Tewkesbury, proving the existence of insects during the deposition of the upper portion of this formation, and Mr. Stuckland has found elytra and wings in the lower division at Evesham, twenty miles from Wainlodes.

3. "On Certain Impressions on the Surface of the Lias Blom Bed in Gloucestershire." By Mr. H. E. Stuckland, F.G.S.—These impressions have been noticed at only one locality, Wainlodes Cliff on the Severn, where they occur in the uppermost surface of the band of mica-schist sandstone, there representing the "limestone bed." The deposit appears to have consisted of a fine-grained sandy sand, capable of receiving the most minute impressions, whilst the pure black clay which forms the supercambrian stratum, has preserved the exact surface in the most unbroken condition. The markings are of four kinds:—1. Lengthened and nearly straight, grooves about one-tenth of an inch in width, and several inches long, very shallow, and with a rounded bottom, apparently caused by some object striking the surface of the sand with considerable impetus. They may have been caused by fish swimming with velocity in a straight direction, and occasionally touching the bottom with the under part of their bodies. 2. Small irregular pits averaging one-quarter of an inch wide, and one-eighth of an inch deep, possibly caused by small-fiddling fishes preying and tearing up the surface in quest of food. 3. Narrow deep grooves about one-twelfth of an inch in width, the sides being at an angle at the bottom, irregularly curved, and making short turns, possibly caused by the movements of an amphipodus malus, the pedunculus? amphipodus? amphipodus? 4. A tortuous track, consisting of a slightly rounded ridge about one-tenth of an inch wide, with a fine linear groove on each side, in all probability caused by the crawling of some of the smaller amphipods. A comparison of these tracks, with those made by living crustacea, and marks of the genus *cypris*, offered only negative evidence. They were accompanied by impressions of a fossil body.

INSTITUTION OF CIVIL ENGINEERS.

JAN. 10.—The first meeting of the season was commenced by a discussion upon a paper by Mr. R. Davison, describing the sinking of the deep well at Messrs. Truman and Co.'s brewery. In the opinion of some of the members, the difficulties which had occurred in the sinking of the cast-iron cylinders arose from the attempts to force down too great a length at a time; it was usually found that lengths of more than thirty feet each, were liable to be impeded by the lateral pressure of the surrounding earth. The pumping also of the water, from the well, whereby a large quantity of sand had been raised, had caused the cavity to take place behind the cylinders, and the face of the staining of the well; it was found essential during the progress of a well through sandy strata, to preserve such a depth of water in it, as should, by its pressure, keep back the sand; for if the equilibrium was for a moment destroyed, the sand ran in, and filled up the bottom, leaving a cavity behind the cylinders, and in some cases, this had endangered the surrounding building, by causing the earth to give way for some distance round the well. It is more advantageous to carry the cylinders down to the chalk, and to excavate a full-sized well in the stratum, where side drifts may be cut, so as to gain a copious supply of water, and sand; at the same time, a reservoir in the chalk; as was done by Mr. Braithwaite, at Messrs. Reid and Co.'s well in Liquorpond-street brewery. The author explained, that in order to guard against destroying the equilibrium between the water and sand, he had given instructions that the water should not be drawn below a certain point in the well; unfortunately this had not been attended to, and the influx of sand had ensued. The action and use of the "miser," or "anger," for excavating the earth in well sinking, without pumping, was fully described, and a complete account of the well now sinking at the Royal Mint was promised to the institution by Mr. Clark, of Tottenham, who has executed so many of these works. It appeared that this useful instrument was first introduced by the late Mr. Vulliamy, of Pall Mall, in sinking some deep wells, which were intrusted to his direction.

A paper was read on "The Co-efficient of Labouring Force in Overshot Water-Wheels," by Mr. R. Mallet. The communication was so voluminous, and so interspersed with mathematical formulae, that it was necessarily read in abstract. It gave a brief historical account of the theory of water-wheels according to the experiments of Borda and Smeaton. The opinions of the latter engineer as to the relative proportion of the diameter of the wheel to the height of the fall—it quoted Dr. Robinson's doubts whether any advantage was gained by the large diameter of the wheel, with a view of settling which question, the experiments were undertaken. It then detailed the methods employed for determining the question, as also that of the advantage or disadvantage of adapting to the water-wheel, a circular channel or conduit, extending from the level of the axis to the lowest point, and so constructed, that it should retain the water in the buckets longer than if the wheel worked in a free race; while, by means of screws, it might be withdrawn from the periphery of the wheel during frost, or in case of repairs being needed. From the result of the investigation, it appeared that the author considered Dr. Robinson's views on the subject should receive a limitation, and that a positive advantage arose from the use of the circular channel, varying with the conditions of the wheel, and fall from 3 to 11 per cent. of the total power. These and all the other results of the experiments were given in an extensive series of tables. In the discussion upon this paper, the opinion appeared to be that the modern practice of making water-wheels very wide, so that the buckets were only about one-third full, was, with the good form of buckets now generally adopted, preferable to the use of the circular conduits recommended by the author, to the accuracy and usefulness of whose experiments full merit was accorded.—The meeting adjourned until Tuesday, the 17th inst., when the council and officers for the session would be elected.

REVIEWS.

Examples of Railway Making; which, although not of English practice, are submitted, with practical illustrations, to the Civil Engineer and the British and Irish public. By JOHN WEALE, High Holborn.

As the claims on our columns will not permit space being devoted to so full and descriptive a review of its contents as the importance of the information detailed requires, we cannot do better, in directing attention to this work, than adopt the words of the author, who states the object of his publication to be, the introduction "to the notices of professional engineers, and the commercial and trading classes, the leading principles of a system of railway construction which has not been practised in Great Britain or Ireland, or as yet been sufficiently explained to lead to its adoption by those most interested in the subject." Towards effecting this desirable end two extremely interesting papers are here published—one, a scientific description of the mechanical works on the Utica and Syracuse Railroad, by Mr. H. F. Isherwood, C.E., of New York, "presented as a valuable and practical illustration of the more economical system of railway construction recently adopted in the United States"—this line, as our readers are aware, affording one instance, out of many in the United States, in which a railway to be worked by locomotive power has been constructed and appointed at an average cost per mile of 3000*£*, while that of our railways in Great Britain and Ireland has been about 30,000*£*, the Belgian 15,000*£*, and the Prussian about 9,000*£*. The other paper is devoted to an historical, statistical, and scientific account of the Railways of Belgium in 1842, by Mr. E. Dubois—to which is prefixed, as "preliminary observations," forty-two pages of valuable remarks and statistical information, the object and tenor of which will be readily understood by the following concluding suggestions, offered "to those who may be more particularly interested in the projects now contemplated for an extension of railway communication in various districts of the United Kingdom"—1. a strict regard to economy as the basis of such constructions; 2. the adoption of such legislative enactments as may best control the expenditure in all its ramifications; and 3. the selection, from the maximum share-holders, of such only as are willing to discharge gratuitously the duties of chairmen, vice-chairmen, and directors—assured that by a rigid adherence to these leading principles the success of such projects may be most effectually promoted, and thus produce a happy concomitance by the advantageous employment of British capital and by a more general diffusion of means for the advancement of British industry." With that part of the foregoing conclusions recommending the gratuitous performance of important duties, it is well known we do not agree, nevertheless we cannot withhold from the author the credit of having expounded his views with clearness and perspicuity. The profession, and, indeed, the public in general, are deeply indebted to Mr. Weale, for proceeding in his laudable purpose so vigorously, as the spirited manner in which he has introduced these memoirs to the English reader so amply testifies—being embellished by thirty-six well-executed engravings, each descriptive of some peculiar plan, machinery, or process, of interest to the engineer or contractor as elucidating the economy of the railway system as adopted in America and Britain—two countries which have gained celebrity as the nearest approach to our own in exhibitions of scientific progress and mechanical improvement.—We hope the patronage the work merits will be bestowed on Mr. Weale, and that he may be thereby encouraged in favour us with many similar works, as they must prove of paramount importance in developing the progress of continental improvements in railway construction.

A Compendium of British Mining, with Statistical Notices of the Principal Mines in Cornwall; to which is added the History and Uses of Metals, and a Glossary of the Terms and Usages of Mining. By J. G. WATSON.

This little work being professedly a compilation, intended for private circulation, and the object of the writer, as stated in the introduction, not being "to enter into scientific theory or speculation, nor to assist the practical miner, but to give plain facts as they exist," it is evidently placed beyond the pale of the critic's praise or censure; but Mr. Watson's labours being directed to a subject in which we feel deeply interested, and naturally anxious to promote, we cannot help publicly recording our wish that he may pursue his researches and studies, with the view of producing a work, for public use, that may have an opportunity of expressing an opinion on the publication of a writer, whose object appears to be the diffusion of useful knowledge in connection with this important national interest. Our intention of availing ourselves of much of the statistical information contained in the work is sufficient proof of the opinion we entertain of its general correctness.

APPARATUS FOR GIVING NOTICE OF THE PRESENCE OF CARBURETTED HYDROGEN.—An invention is described in the French papers which will, it is said, give such timely notice of the presence of deleterious gas in mines, or other places, as will enable persons to take the necessary precautions to guard against explosions. An explosion from the admixture of carburetted hydrogen with atmospheric air can only take place when the former exists in a certain and known proportion. When the quantity has reached or exceeded this point, the contact of a light instantly causes an explosion. The instrument recently invented has a sort of bell-tile to show the existence of danger, and is simple, ingenious, and effectual. Connected with a chemical solution is a kind of float, nicely graduated, and attached to a counterpoise. The solution is of such a nature that it undergoes a change when acted upon by the admixture of carburetted hydrogen, and, when saturated

PROCEEDINGS OF PUBLIC COMPANIES.

MINING COMPANY OF IRELAND.

The half-yearly meeting of this company was held at the company's office, on Thursday, the 8th inst.

THOMAS PIN, Esq., in the Chair.

The usual preliminaries having been gone through, Mr. H. PURDY (the Secretary) read the following REPORT.

When your board last addressed you a correct estimate of the effect of the new tariff, or scale of duties on importation of foreign ores and metals, could not be formed; but your board ventured to express a hope that by a reduction of rents and other arrangements the altered circumstances in which the mining interests of the kingdom had been placed would be alleviated, so as to maintain those interests in a prosperous state—thus securing the permanence of the works in which landlords and tenants, as well as the labouring class, are so deeply interested. For so far there has been no disposition evinced to abate the increased rent now charged for Ballincollig mine, at Knocknacash, where expensive improvements have been nevertheless effected. The company's other landlords have granted all that has been required of them, and by a judicious curtailment of expenditure and an altered system of working, rendered necessary by the altered circumstances adverted to, the pressure has been overcome, and your board is enabled to show in the accounts presented an increase of profits amounting to £2,425. 18s. 7d. in the half year now ended above the amount recorded in the previous six months.

Referring to the abstract of accounts for the half year and the auditors' report thereon, your board has only to submit for your consideration the following summary of the result of their workings.—Your profit in the half-year amounts to £1,501. 6s. 4d., of which there has been expended in permanent improvements £473. 14s. 7d., and the balance available for dividend is £473. 12s. 7d.

The Knocknacash mines have yielded 4,811 tons of ore, being an excess of 810 tons above the previous return, and the profit has been proportionately increased. The present prospects also are very favourable, especially in the deep level of the Knocknacash part of the district; and although the workings in Ballincollig have been again interrupted by a flood, or dislocation of the strata, which may cause delay and expense, as has been frequently the case hitherto in this portion of the mines on similar occasions, there is an abundant field for extensive operations in the district, and your board sees no prospect of a diminution of the returns from those mines for a considerable period of time. The company still labours under serious disadvantage in this extensive district by the want of suitable accommodation for agents and workmen, your board having been disappointed in the expectation of a lease of ground for building purposes.

The Silverdale collieries have yielded 25,349 tons of large and small coal; of the latter however a considerable part remains uncolled, which may be attributed in part to hesitation on the part of the farmers in their late, and perhaps present, state of uncertainty as to prices of produce, which may have prevented the usual outlet in burning lime for manure, hitherto the great source of demand for small coal, called culm, at these collieries. In other respects the prospects are satisfactory; for although the coal was not found at the bottom of the new pit at Mardyke 6½ yards from the second seam, it has been traced to within twenty yards of the end of the level driven from the bottom of the pit, therefore the extent of the fault is ascertained.

The extreme low price of lead has deprived the company of profit from lead mines, except as regards the manufacturing establishment at Ballycove, where the profit has been commensurate to the work done, the ore being always charged to the works at the price obtainable from smelters at the time of delivery.

At Lurganore mines the present prospect is considered very favourable, the lode discovered at the foot of Lurganore mountain, intermediate between the old mine and Riplagh, having become productive, and of a most promising appearance. In the past six months these mines have yielded 225 tons of ore.

At Caines and Ballyholland lead mines the works at surface have been impeded by a misunderstanding with the tenant in occupancy as to the rights of his landlord, the proprietor of the fee, under whom the company holds the mines. An amicable arrangement, however, is in progress, and the direction of the lode having been discovered at the surface, favourable expectations are entertained of the concern, provided improvement in the price of lead shall enable the company to dress with profit the rough material obtainable at these mines, which produced 250 tons within the period of the present account.

The searches at Silver mines have been concluded, and the machinery and mining materials have been removed to Knocknacash mines.

An Act having passed the legislature by which each transfer of the company's shares becomes liable to stamp duty of £1000, similar in amount to the rate payable upon a transfer of real estate, occurring on an average perhaps once in a century, your board has to report that when the bill was before the House of Commons memorials were forwarded on behalf of the company to the First Lord of the Treasury and Chancellor of the Exchequer, praying for exemption from the tax, from which however no relief was obtained, and the tax came into operation on the 10th of October. Your board is, nevertheless, conjointly with the representatives of other joint-stock companies, desirous to press upon the Government—and, if necessary, the legislature—the impolicy of the measure complained of, which tends materially to check the rising enterprise of the country, whilst, from the exorbitant rate of the tax, it must be almost wholly unproductive as a source of revenue to the state.

Your board has only further to recommend a dividend from the profits of the half-year, at the rate of 1½ per cent. per annum, payable on and after the 1st February; and that the surplus of net profits be retained for future distribution when the effect of the new scale of duties and the arrangements consequent thereon shall be more fully developed.

A resolution was then proposed and seconded, that the report just read should be adopted and printed and circulated among the proprietors.

Mr. GIBSON said he wished to ask a few questions. It appeared, in the stock account, that a charge of £500. 18s. 11d. was deducted for the cost of losses from 1836 to 1841. In his opinion the amount ought to have been entered in the profit and loss account, and not as a deduction from stock. Two years ago there had been an excess of profit amounting to £17,000, which was merged into stock; if this sum had been divided among the proprietors they would have had 2½ additional per share to re-invest in the company, and thus diminish the extent to which they would be liable if required to pay up the full amount for which each shareholder was responsible. He also wished to inquire about a sum of £241. for law expenses; at also the proceedings in respect to the Audley Royalties.—The SECRETARY and CHAIRMAN explained that by the strict rules of book-keeping the sum of £500. first alluded to was properly to be a deduction for stock, for losses were to be regarded as part of the purchase money of property. The account for losses, as also the solicitors' bill, had been most carefully examined by a committee of the directors and the auditors, and the charges were found to be most moderate. The solicitors of the company had acted with the utmost liberality. The costs incurred in defending the proprietors' rights as respected the Audley Royalties were likely to be recovered upon a sale of the estate, as the costs in the cause would follow the decree.—Mr. H. TILFORD explained that it had been necessary for the company to take some steps to secure the large sum of £10,000, and legal proceedings were going on almost from the institution of the company. The Messrs. Wallace, the solicitors in the cause for a considerable period, had acted with much liberality, and taken off more from the costs than the master would have done.

Mr. GIBSON then inquired, why between pool, and 18000, had been expended on the Corrig-estate mine?—The SECRETARY explained that this sum was mostly for machinery supplied by Mr. Robinson, whose account had not been sent in at the last meeting.

Several PROPRIETORS objected to the course pursued by Mr. Gibson, declaring that the board of directors had justly the utmost confidence of the proprietors, and that the time of the meeting was by such questions wasted.—Mr. PEARY stated that there was a committee of account, and after the most rigid inquiry they did not find any charge to which they could object.

After some further questions, which were satisfactorily replied to, Mr. GIBSON moved, as an amendment to the resolution for the adoption of the report, "that the directors' fees be reduced 50 per cent." which, after some very animated speeches in favor of the directors, was withdrawn, and the original motion carried without a division.

Mr. CHATTON congratulated the company on the very prosperous state of their affairs. The last half-year they were in doubt as to the operation of the tariff, and as to the effect it might have on their property, but the doubts were then removed, and the concern was in the most prosperous condition.

The meeting, after voting thanks to the chairman and directors, adjourned.

THE LONDON JOINT-STOCK BANK.

The half-yearly meeting of the shareholders of this bank was held on Wednesday, the 11th inst., at the establishment in Princess-street, Lombardy. Mr. ALEXANDER MOORE in the chair. From the report it appeared the net profit on the banking operations for the six months ending the 31st ultimo was £10,180. 18s. 11d., from which sum it was proposed to apply £10,000. for the payment of a dividend after the rate of six per cent. per annum, and to carry the remainder to the credit of the guarantee fund, which now amounts to £4,625. 17s. 7d. After a short and friendly discussion between the Chairman, Mr. Knight, Mr. Hughes Hughes, Mr. Monk, and others, the report and accounts were adopted, and a vote of thanks was passed to the directors and managers of the company, when the meeting adjourned.

Mr. JEFFREY'S MARM. GLASS.—As much misconception has gone abroad relative to the composition of this glass, which is supposed by many to be merely common glass and shellac, and, as the proprietor makes no secret of the composition, but has thoroughly instructed the men of Woodstock and Chatham dock-yards in its manufacture, as well as use, it may be interesting to our readers to know the substance of which it is composed. A quantity of camphene is dissolved in camphene, and shellac is then added, in proportions varying from one half to three quarters of the solution, according to the degree of elasticity required; it is then placed over a fire, and duly incorporated, and applied to the wood to be joined as thin as possible. When larger surfaces, such as masts, are to be joined, the glass is uniformly applied, a heated iron or salamander passed over both faces to bring them to a high temperature, and, when cool, the joint is complete. To show the similarity of the composition, a block of old oak, with a coat three-quarters of an inch wide at the opening, and increasing in the form of a wedge, was filled with the glass, and on examination, after nineteen days' exposure to the heat of the building used for burning old ship-timber, the opening had increased to an inch, and the glass had expanded to the same proportion, having only a small opening at the top. Another similar piece was immersed in the sand-pit, and after nineteen days it was examined, and the wood had considerably enlarged—the glass had, however, given up, and turned coarser at the surface; thus proving that it can retain its adhesive and elastic properties under any common temperature.

MINING CORRESPONDENCE.

ENGLISH MINES.

HOLMEHURST MINING COMPANY.

Jan. 9.—In the 110 fathom level west the lode is one foot wide, and worth 18d. per fathom. The lode in the 100 fathom level west is eight inches wide, and worth 6d. per fathom; this level, east of Wall's, on the Holmehurst lode, and the cross-cut south of ditto, towards the Flapjack lode, are without alteration; in the wings sinking below the 100 fathom level the lode is nine inches wide, and worth 12d. per fathom; the lode in the slopes, in the back of ditto, is eighteen inches wide, and worth 3d. per fathom. In the eighty and ninety fathom levels, west of Hitchin's shaft, no alteration since last reported; in the wings sinking below the ninety fathom level the lode has not yet been taken down; in the eastern slopes, in the back of this level, the lode is eighteen inches wide, and worth 3d. per fathom; the lode in the middle slopes, in the back of ditto, is still about twenty inches wide, and worth 6d. per fathom; the lode in the western slopes, in the back of ditto, is eighteen inches wide, and worth 3d. per fathom; in the eighty fathom level east the lode is nine inches wide, and worth 6d. per fathom; in the cross-cut at this level nothing new has been discovered during the week; we have now set the men to drive on the branch we intersected about three weeks since; as the lodes are not certain that it is not the lode, although small at this place; the lode in the slopes, in the back of the eighty, is sixteen inches wide, and worth 6d. per fathom. In the sixty-two fathom level east we have intersected the north part of the lode, but at present find it much disordered, it being split into branches. The twenty fathom level east is suspended, and the men removed to drive the sixty-two fathom level west. The deep adit east and the tribute pitches are much the same.

F. PRATHERS.

TINCROFT MINING COMPANY.

Jan. 9.—The lode in the new engine shaft, below the sixty fathom level, is about two and a half feet wide; every throughout, worth 18d. or 20d. per fathom. The lode in the sixty end east is two and a half feet wide, producing but a small quantity of ore at present; the same level, west lode, three feet wide, worth 18d. per fathom, and likely to improve. The slopes in the bottom of the fifty are worth 3d. per fathom. The fifty east is unproductive. Since my last, we have holed the wings under the forty to the rise in the back of the fifty—have again commenced driving the forty end west. No lode taken down this week. We have now set to slope east from the aforesaid wing, where the lode is worth 6d. per fathom. The forty end west is at present worth about 20d. per fathom, and very promising. The thirty end west of North Tincroft shaft is worth about 18d. per fathom, and also very promising. Our tributaries are all likely to get fair wages at their respective tributaries (as stated in the setting report). At Palmer's shaft, fifty-five fathoms level west, we have cut East Pool lode, and I am glad to say it has a very promising appearance indeed. The seventy-two end east, on Highburrow lode, has improved for the since my last; I calculate the end is now worth 20d. per fathom. The pitches have also improved for copper. Our prospects, on the whole, are very encouraging.

W. PAUL.

WEST WHEAL JEWEL MINING ASSOCIATION.

Jan. 9.—We have set Buckingham's engine-shaft to sink below the eighty-five fathom level; the ground in the eighty-five cross-cut is more favourable for driving than when last reported. At the seventy east, on Wheal Jewel lode, the ground is harder for driving, and the lode is worth 6d. per fathom; this level is worth 18d. per fathom. The fifty-seven east, on this lode, is worth 20d. per fathom; the wings sinking under this level is worth 18d. per fathom. The wings sinking under the forty-two east is worth 18d. per fathom, and the slopes in the back of this level still continue good.

S. LEAN.

TRELLIGH CONSOLS MINING COMPANY.

Jan. 7.—At Christie's eighty fathom level very little has been done during the week, in consequence of the water. The seventy is two feet wide, and worth 5d. per fathom. The fifty is worth 4d., and the forty is worth 6d. per fathom. At Good Fortune the forty-four west is three feet wide, and worth 6d. per fathom. The thirty-four is worth 5d. per fathom. We are stopping the back of the fifty, but the water has been in during the week. W. SYMONS.

TRIGOLLAN MINING COMPANY.

Jan. 9.—I have great pleasure in stating that the lode in the bottom of the engine-shaft, sinking below the sixty-two fathom level, is very much improved. The lode in the sixty-two end east is looking well, and the lode in the fifty fathom level east also presents a very favourable appearance. We have already passed through twelve fathoms of ore ground at the sixty-two fathom level, and, taking the mine altogether, I think she never looked better than at the present time.—I cannot furnish you with any particulars respecting the lode in the shaft, as we have not yet done sufficient since the change took place to enable me to do so.

J. NINNIS.

TRETOIL MINING COMPANY.

Jan. 9.—The lode in Headwood's shaft, sinking under the forty fathom level, is eighteen inches wide—good tribute ground. The lode in the forty fathom level, east of Headwood's shaft, is one foot wide—very good tribute ground; ditto, west of Headwood's shaft, is nine inches wide—good tribute ground. The lode in the thirty fathom level, east of Headwood's shaft, is one foot wide, producing a small quantity of ore. We have not discovered any more lode in driving south on the cross-course at this level. The tin lode which we are stopping in the back of the adit, east of Murray's shaft, is much the same as last reported.

H. WILLIAMS. J. MORCOM.

UNITED HILLS MINING COMPANY.

Jan. 7.—Seventy Fathom Level, East of Williams's Shaft—Lode three and a half feet wide, two feet on the south part ore of fair quality; ditto, west of ditto, inde three feet wide, producing but little ore. Sixty Fathom Level, East of Eastern Shaft—Lode four and a half feet wide, fifteen inches good ore; ditto, west of Diagonal shaft, lode four and a half feet wide, producing ore throughout, but not rich. Fifty Fathom Level, east of Eastern Shaft—Lode four feet wide, two feet ore of good quality. Forty Fathom Level, east of Eastern Shaft—Lode three feet wide, producing some good stones of ore; adit end east, at Wheal Sparrow, the lode is three feet wide, producing some ore, with a promising appearance; western shaft, sinking at ditto, lode two feet wide, one foot on the north part good ore. At James's shaft, sinking under the fifty fathom level, lode three feet wide, one foot on the north part producing good ore.

N. LANGDON. S. H. PRANCE.

BEDFORD UNITED MINING COMPANY.

Jan. 10.—I beg to hand you my report of Wheal Marquis. In the forty fathom level east the lode is about two feet wide, and of the same character as last reported. At the thirty fathom level it has been thought prudent to suspend it for the time. In the shaft sinking on the eastern part of the mine the lode is two and a half feet wide, composed of gneiss, apatite, mica, grey and black spots of yellow copper ore, and worth about 20d. per fathom. The pitches remain without alteration. The surface arrangements, erection of wheel, &c., are progressing with great vigour.

J. PHILLIPS.

CORRIEAN MINING COMPANY.

Jan. 9.—We find the north lode in the seventy fathom level one foot and a half wide, principally composed of mica-schist; not having found the lode of this nature in the levels above, whilst passing through the unproductive ground, we anticipate the change favourable for the productive ground. We have just cut south through Chiverton lode, and find it much the same character as the north lode, but the latter is the most favourable for driving. The fifty fathom level has much the same appearance as reported last week, yielding a little lode. The lode in the fifty end, west of Murray's shaft, is one foot and a half foot wide, composed of felsite and spots of lead.

J. WOOD.

FARLOW SILVER-LEAD MINING COMPANY.

Jan. 9.—In the 120 fathom level the lode is intersected with a side course, which, for the present, has disordered the lode. In the 115 fathom level the lode is about eighteen inches in width, still producing good work, and a promising level. In the 100 fathom level the lode is from two to three feet wide, of a very promising appearance, and producing rich ore. In the ninety-five and the lode is two feet wide, saving work. In the eighty-five fathom level the lode is from six inches to one foot wide, producing good stones of ore, and looking favourable for a further improvement soon. In the seventy-five fathom level the lode is one foot wide, of just the same quality and appearance. In the sixty-five fathom level the lode is eighteen inches wide, producing some good work. In the fifty-five fathom level the lode is small, and producing but a small quantity of ore. In the forty-five fathom level the lode is also small and unproductive. At the north mine the engine-shaft is now down about twenty-four fathoms below the adit; the ground at present is rather harder for sinking.

JAMES BURRAGE.

FOREIGN MINES.

IMPERIAL BRAZILIAN MINING ASSOCIATION.

Gongo Seco, Oct. 22.—The mine continues to present the same poor appearance it did when I last addressed you. Gold has been seen occasionally in the veins at Corti's, between the thirty-four and forty-one fathom levels, but no work was obtained for the working-holes. A reference to the gold returns will show, I am sorry to say, a falling off in the stones produced for the last two days.

J. A. CHACON.

Gold Report.—From 1858 to 280 Oct. (six days), 12 lbs. 2 ozs. 6 dwt.—Total from 1st July to 280 Oct., 339 lbs. 4 oz. 17 dwt.

BRAZILIAN COMPANY.

Coto Branca, Oct. 24.—The gold report for the past week still continues much the same, and, as a very fair proportion of the bottoms has been sent out, I really cannot hold out any hope of an improvement; nevertheless, I will repeat, that the lode, in my opinion, is of no promising a nature as I ever saw it; and I will add, that the poor produce which we have had from it, is, to me, a marvel. Much trouble has been experienced lately in the shaft, from the number of stones which have been sent, through which the powder has blown away without doing more than breaking the ground, and, consequently, obliging it to be worked out. It is my belief that we are not

far from a main floor, and I am very anxious to see the same under it. I hope the new engine-shaft will be hoisted to the thirty fathom level in ten days, and in ten days more the new 10-inch plunger fixed there; this will remedy many inconveniences, and enable us to drive immediately from the lode west of the cross-course—a most important point. The Bahia (See Asturias) is still poor, but no just opinion can be yet formed as to how these lodes will answer; and I regret to say, that, I fear, we shall not be able, just now, to prosecute the trial further—the heavy rains causing the Cata Branca stream to do so much damage that every man is required to break stones for them.

W. COTEWORTH.

Gold report for two weeks to 21st Oct., 26 lbs. 9 ozs. 11 dwt., 15 grs.

RIVER WANDLE WATER COMPANY.

The importance of, and necessity for, an ample supply of pure and wholesome water for the purposes of this vast metropolis, has long occupied the attention of Parliament, and is now fully felt, and universally admitted, by the community at large. That this supply cannot be effected by resorting to the river Thames, has been clearly demonstrated by the reports of the Parliamentary committees, and by the opinions of Dr. Roger, Dr. Bostock, Prof. Faraday, Mr. Brande, Mr. Telford, and other scientific gentlemen, who have given evidence on this subject before the various committees of the House of Commons. The report of the select committee appointed to inquire into the present system of supplying water to the metropolis, under date July, 1829, says, that the river Thames, as it approaches the metropolis, becomes loaded with a quantity of filth, which renders it improper to be employed in the preparation of food, &c. That it is obvious, that water receiving so large a portion of foreign matter as it is known find their way into the Thames, and so far impure as to destroy fish, cannot, even when clarified by filtration, be pronounced entirely free from the suspicion of general insipidity. The present state of the supply of water in the metropolis is susceptible of, and requires, improvement—that many of the complaints respecting the quality of the water are well founded—and that it ought to be derived from other sources than those now resort to, and guarded by such restrictions as shall, at all times, insure its cleanliness and purity. The water was, at the time quoted, supplied by the West Middlesex, Grand Junction, Chelsea, New River, East London, South London, Lambeth, and Southwark Water Companies. The committee further approved of the opinion of the commissioners, that the supply of water for the metropolis, including the burroughs of Southwark, and the adjacent parishes, should be derived from a pure source than it is at present, not recommended that Mr. Telford should proceed with making such surveys as should be necessary. It has been decided, that filtering the water has but little effect as to rendering it wholesome, as is proved by the evidence of Mr. R. M. Kerrison, M.D., in his examination before the committee in

THE MINING JOURNAL,

SMOKE NUISANCE.—ECONOMY OF FUEL WITHOUT THE NUISANCE FROM SMOKE, by C. W. WILLIAMS'S AIR-FURNACE.

The principle of this furnace consists in the mode by which the air is introduced to the gases, which are derived from coal, whereby a more perfect combustion of the substances is effected, the process being conducted on true chemico-physical principles, as explained by Mr. Williams, in his *Treatise on the Combustion of Coal*. A furnace, constructed on this principle may, by permission, be daily seen in action at the Liverpool and Harrington Water-works, Duke-street, Liverpool.

For further information, apply to Dircks and Co., agents, 8, Town-hall-buildings Cross-street, Manchester; or to Mr. C. W. Williams, Liverpool.

SMOKE PREVENTION.—CAUTION.—DIRCKS and Co., AGENTS for Mr. CHARLES WYE WILLIAMS'S PATENT FURNACE.

Notify the PUBLIC, that they have NO CONNECTION with Mr. JOSEPH WILLIAMS, of Liverpool, nor have they ever authorised him to set up any of the said furnaces. They do it here necessary to state the following facts:

1. That Mr. Joseph Williams has no patent for any furnace or other invention.

2. That the patent which he affects to carry into execution was taken out by Mr. A. KURTZ, of Liverpool, on the 6th of November, 1840, and of which he was then advanced as the agent.

3. That, under colour of such patent, Mr. J. Williams has been adopting various plans for introducing air to furnaces, one of which, by means of hollow bars, proved unsuccessful.

4. That the modification of the plan which he is now proposing to adopt, and so lithographed by him, and which he introduced into the steam-pocket the *Urgent*, is not only wholly distinct from Mr. Kurtz's patent, but is a direct infringement of that granted to Mr. C. W. Williams. Dircks and Co., therefore, caution Engineers, Manufacturers, and others, against its use; and they further suggest the propriety of parties to whom Mr. Joseph Williams may apply, to call on him to exhibit his pretended patent, or show his right to any patent, before they sanction such infringement.

Mr. Joseph Williams has advertised "that the patentees have forborne pressing their invention," Mr. D. and Co., therefore, suggest, that he ought, after this notice, to be required to state who are those "patentees," and what is the "invention" to which he lays claim.

For the information of the public, D. and Co. observe, that the Patent of Mr. C. W. Williams consists in the introduction of atmospheric air, in small or thin films, in the heated inflammable gases generated from coal in a furnace, the object being to effect the impeded diffusion or mixture of the air with such gases, without producing that cooling effect which takes place when air is admitted by large or wide orifices.

Mr. Joseph Williams affects to make a distinction between the introduction of hot, instead of cold, air, and for this purpose he merely raises the pipe which conveys the air to the air-box, or chamber, so as to be on a level with the fire-bars. This, however, is but a mere colourable pretence to cover the deception, the effect being the same in whatever situation such air-conducting pipe is placed.

TO ANDREW KURTZ, Esq.

DEAR Sir.—As your name was mentioned in the advertisement which appeared in the Liverpool papers, from Messrs. Dircks and Co., respecting the infringement of my patent by Mr. Joseph Williams, under colour of being agent for yours, I have to assure you, it never was intended to convey, in the remotest manner, any idea that you in any way encouraged or sanctioned Mr. J. Williams in the step he was taking. Your assurance on that point, in your former communication to me, was quite sufficient, and your recent indignant disavowal of those measures, only confirms me in the propriety of settling the matter right before the public. I regret the necessity for introducing your name in the advertisement of Messrs. Dircks and Co., and take this public means of expressing my obligation for your so distinctly disclaiming and condemning the proceedings of Mr. Joseph Williams, of whose conduct in this matter you so strongly expressed your disapprobation.

I am, very truly, yours, C. W. WILLIAMS,

CAUTION.—SMOKE PREVENTION.—Mr. JOSEPH WILLIAMS.

The public have already been CAUTIONED, by the ADVERTISER-

MENT OF DIRCKS and CO. (see the *Mining Journal*, the *Advertiser* and other Liverpool papers), AGAINST THE IMPOSITIONS PRACTISED BY MR. JOSEPH WILLIAMS, of this town, who, bearing no patent of his own, has, under colour of applying the patent of Mr. Kurtz, been introducing MODIFICATIONS AND INFRINGEMENTS of the PATENT of Mr. C. W. WILLIAMS, for the MODE OF INTRODUCING AIR to FURNACES and the PREVENTION of SMOKE.

In his late advertisement (see the *Mining Journal*, and the *Advertiser* of the 31st December), Mr. Joseph Williams states as follows:—"That he is the acting proprietor of Kurtz's patent, and the fact, that the patent is the smoke consumer which he dectoers it to be, was acknowledged by Mr. Andrew Kurtz himself on board the *Urgent*." To this allegation Mr. Williams states, on the authority of Mr. Kurtz himself, that that gentleman was asked to go on board the *Urgent*, the object being, actually, to convey an impression that Mr. Kurtz was connected with what was done in the furnaces of that vessel, and sanctioned the same; that Mr. Kurtz was then, for the first time, informed of what was done on board the *Urgent*, under Mr. Joseph Williams's directions, and of the apparatus behind the furnace bridges for regulating the size of the orifices through which the air is admitted, and that Mr. Kurtz (of course) disavowed the same, as not forming any part of his patent; that the plan adopted in the *Urgent*, as regards the situation of the fire-bars, was also subsequently altered—thus departing still further from Mr. Kurtz's patent; and that, so far from the plan or apparatus so adopted by Mr. Joseph Williams being "acknowledged by Mr. Kurtz," such assertion is not only false, but directly the reverse of the fact.

He is hereby further stated, that the mode of admitting the air adopted by Mr. J. Williams, and by which he attempted to deceive the Admiralty and the public, under pretence of being the patent of Mr. Kurtz, is in no way conformable to that patent, and that neither Mr. Joseph Williams, nor any one connected with him, has a patent for the same—such being a direct infringement of Mr. C. W. Williams's patent.—Liverpool, Jan. 7.

SMOKE NUISANCE.—Mr. JOSEPH WILLIAMS, of 67, Bedford-street, Tiverton-park, near Liverpool, has the authority of Sir John Barron, Bart., the Secretary to the Admiralty, for announcing to the public, that the PATENT APPARATUS (Andrew Kurtz's patent) for the COMBUSTION of SMOKE and SAVING of COAL, attached to her Majesty's steam-packet *Urgent*, Late, Emerson, R.N., commander, after being in use for six months on the Post-office station between Liverpool and Dublin, is found to answer in every respect, and in the six months the saving of coal upon the *Urgent* has been about 400 tons, as per extended report. The apparatus is simple in its construction, and is equally adopted for land and marine engines. The patentees have forborne pressing their invention upon the public, until its merits could be ascertained by adequate trial. This it has undergone upon a large vessel plying in the Channel throughout the winter months, and they, therefore, now feel warranted in inviting the attention to it of all persons anxious for the removal of the nuisance of smoke from steam-engines. To those who are concerned in steam navigation it may not be unnecessary to mention, that, with this apparatus, a steam-vessel going before the wind has no occasion to open her furnace doors, or to alter her course in order to keep a look-out and a head—having no longer a cloud of smoke hanging over the bows, she can keep her course without slackening her speed.

Messrs. Dircks and Co., the agents of Mr. C. W. Williams's patent, jealous of the advertiser's success, state that he has no patent, in which pretensions assertion he should only reply, that he is the acting proprietor of Kurtz's patent, for his share in which he has paid successive value, as is proved by documents in his possession, and which he has exhibited in the editor of the *Liverpool Mercury*, and the fact that the patent is the smoke consumer, which he dectoers it to be, was acknowledged by Mr. Kurtz himself, to Captain Emerson, Mr. Elliott, the engineer, and Mr. John Headstone, on board the *Urgent*, on the day that vessel first sailed. When the patent apparatus had been applied to it—namely, on the 31st December, 1841.

For terms and particular application may be made to Mr. Joseph Williams, 67, Bedford-street, Tiverton-park, near Liverpool; to Mr. Wilson Headstone, Woodstock-street, Chester; to Mr. John Headstone, Grosvenor-street, Brunswick-street, or to Messrs. Lovell, Robinson, and Bateman, solicitors, Liverpool.

*This is to certify that we have had the Patent Smoke Combining Apparatus of Joseph Williams and Co., 67, Bedford-street, Tiverton-park, in operation at the New Mills belonging to Dennis Gills, Esq., for the last three months, and we consider it to be a very great saving, at least one-third, in the consumption of coal, and the reduction of smoke, which was greatly complained of in the neighbourhood, it now completely removed.

The apparatus, which is upon the principle of hot air (of the superiority of which over cold air we are satisfied, from ample experience), is simple and easily constructed and kept in order, and we can strongly recommend it to any party who has a boiler in use.

THOMAS HALLS, Manager.

ROBERT SMITH.

THOMAS MURPHY, Fireman.

Blackfriars Patent Saw-mills, August 20, 1842.

*I believe the above report to be correct.

DUNCAN GIBB.

TO PROPRIETORS OF MARINE, LOCOMOTIVE, AND FACTORY BOILERS.—FIFTY PER CENT. ECONOMY IN FUEL.

DESTRUCTION OF SMOKE.—DOUBLE EFFECT OF THE BOILER.

BENJ. VON BAEREN'S PATENT APPARATUS—FIRE-GRATE AND METALLIC FLUER FOR FEEDING WITH HOT WATER.

Benj. Von Baerens's Patent Fire-grate, already in use, during fifteen months, at the Mill Flax and Cotton Mills, had been in daily operation, for three months, at the Paper Mill of Messrs. Wm. Weight and Gadsden, 2, Christian-street, Whitechapel, when a comparative experiment was made, under the inspection of Alfred Gadsden, Esq., C.E., on the 10th, 11th, 12th, and 13th of September last, between the said Patent Fire-grate and the Common Furnace and Firebox-hire, fitted up to two boilers, in exact respect alike. A report of that trial was published in several of the leading newspapers.

On the 10th and 11th December last, another course of experiments has taken place, the object of which was to see what quantity of water could be evaporated by a given weight of coal when the latter was dried—not only with the Patent Fire-grate but also with the Patent Metallic Fluer—and the result of both these experiments has been as follows, in twelve months, of 11 lbs. of water by 1 lbs. weight of coal.

The advantages obtained in the use of the two apparatus, not unconnected by any drawback, are as follows:—

1. Economy of fuel.
2. Reduction of smoke.
3. Double generation of steam.
4. Continued equal intensity of fire.
5. Cleaning.

All these advantages are attested in certificates delivered by Mr. A. Gadsden, C.E., and confirmed by Messrs. Weight and Gadsden, the above-mentioned paper millers.—THE APPARATUS, having no mechanical movements whatever, can be APPLIED TO ANY STEAM BOILER, whether Marine, Marine, or Locomotive, or also to REAR FACTORIES, BREWERY, DISTILLERIES, &c.

Apply, for terms and conditions, to Benj. Von Baerens's office, 21, Newgate-street, City.—Dec. 16.

GEOLOGY.—Persons wishing to become acquainted with this INTERESTING BRANCH OF SCIENCE, will find their STUDIES greatly FACILITATED by MEANS of SMALL COLLECTIONS, which can be had of two, five, ten, twenty, or fifty guineas each, of J. TENNANT, Mineralogist to her Majesty, 149, Strand.

A COLLECTION, for Five Guineas, which will illustrate the recent works on Geology, contains 200 specimens, in a mahogany cabinet, with five trays. The following is an outline of the contents:—

MINERALS, which are either the components of rocks, or occasionally included in them:—Quartz, agate, calcedony, jasper, garnet, scutellite, hornblende, augite, anorthite, feldspar, mica, talc, tourmaline, carbonaceous spar, feldspar, scapolite, baryta, strontia, mica-schist, mica-slate, porphyry, serpentine, sandstone, limestone, basalt, lava, &c.

METALLIC ORES—Iron, manganese, lead, tin, zinc, copper, antimony, silver, gold, platinum, &c.

ROCKS—Granite, gneiss, mica-slate, clay-slate, porphyry, serpentine, sandstone, limestone, basalt, lava, &c.

FOSSILS from the Llandeilo, Weylock, Ludlow, Devonian, carboniferous, Basal, Coal, Warden, chalk, plastic clay, London clay, and crag formations, &c.

NOTICES TO CORRESPONDENTS.

The MINING JOURNAL is regularly published about Two o'clock on Saturday afternoon, at the office, No. 26, FLEET-STREET, where it can always be obtained, and there is no cause for irregularity in its supply, or loss, other than neglect on the part of the agent through whom it is ordered; but, as respects the transmission to country subscribers, the blame is shared with the Post-office authorities.

More extensive premises than those lately occupied being found necessary, the establishment of the *Mining Journal* is REMOVED TO 26, FLEET-STREET (opposite St. Dunstan's Church).

SUPPLEMENTARY SHEET.—The great mass of valuable correspondence with which we have been favoured, renders it requisite to publish another additional sheet, which we shall do with our next Number. To place as much information as possible before our readers this week, we have deferred several leading and other original articles.

INSTITUTION OF CIVIL ENGINEERS.—We have much pleasure in directing attention to the report of the proceedings of the first meeting for the session of this eminent body, on Tuesday last, inserted in another column. The increasing importance attached to the Transactions of this Institution will render a regular record, with which we are promised, an invaluable feature in our columns.

We have received the third of Mr. S. B. Rogers's excellent series of papers, entitled "Data for the Use of Blast-Furnace Managers," which shall appear in our next.

We are obliged to Mr. B. for his complimentary note, but feel compelled, at present, respectfully to decline his proffered assistance. We are anxious to avail, rather than encourage, all discussions of a theological tendency.

"J. F. (Y.) (York).—Mr. Tennant's Lectures on Mineralogical Geology (second course) will, according to present arrangements, commence after the 22d inst., and will be duly reported in the Journal.

The notice of Mr. Holzapfel's work on *Turning and Mechanical Manipulation*, the first volume of which is devoted to "Materials, their preparation, and figure," must stand over until our next, owing to the want of space, arising from the extent of our original correspondence, the work being for too valuable to allow of being superseded by a brief notice.—The work entitled *Principles and Practice of Land Engineering, Marine Surveying, &c.*, by Charles Bours, C.E., as also the *Observations on the Report of the Government Committee on the Atmospheric Geodetic Survey*, by Thomas F. Berlin, M.R.A.S., must likewise stand over.

"Geodetics," on the Theory of Internal Heat.—Mr. Musket's Results of Experiments on the Beamish Black-Band.—Mr. Hartop, on Hot and Cold-Blast Iron—Mr. Taylor, on Ventilating Mines—Mr. Shattock's Hydraulic Propulsion on Railways—Mr. Goodlet, on a New Theory of Applying Steam to an Engine—Mr. T. Deakin, on the Origin of Mineral Deposits, &c., &c., must stand over.

THE MINING JOURNAL,
Railway and Commercial Gazette.

LONDON, JANUARY 14, 1843.

* Parties desirous of ordering the *Mining Journal*, can do so, either direct to the office, or through any newsagent or bookseller in town or country. Notices of irregularity in its delivery are requested to be forwarded to the office, where every attention will be made to rectify the cause of complaint.

The letter of Mr. J. P. BUDD, which appears in our columns of to-day, is such as we should expect—for, in a spirit of fairness, he expresses his readiness to "put down" his 150*l.* to meet that of Mr. GEORGE CRANE, with the view of testing the merits of the respective patents of hot and cold-blast, as applied to anthracite; while the "stand" he takes is, we think, only fair—for he says, if you (Mr. CRANE) are prosecuting me (or my employers, for it is the same in substance) in a court of law, how can you expect that we can prosecute our scientific inquiries, when I must necessarily afford you, in the course of the investigation, the weapons with which you may avail yourself in your legal research?

While we admit this correctness of the position taken by Mr. BUDD, it must, however, be borne in mind that the legal proceedings instituted, have no reference to Mr. BUDD's patent for the manufacture of iron with anthracite, by the application of cold-blast, and, therefore, do not, in any respect, involve the question as to hot and cold-blast with reference to anthracite, but refer alone to the use of CRANE's patent by the Ystalyfera Company, at an antecedent period to the introduction of Mr. BUDD's patent, and, during which time, the Neath Abbey Company worked their furnaces with anthracite and hot-blast, contending that Mr. CRANE had no patent, but who have since been convinced that he had, and have dearly paid for their acquired knowledge.

It will thus be seen that the action pending between Mr. CRANE and the Ystalyfera Company is for *laches* committed by them without any relation to the question at issue; and as the Messrs. PRICE have had to pay for their attempt to evade the patent of Mr. CRANE, we see no reason why the Ystalyfera Company should be allowed to go "scot-free;" indeed, it is a duty, we think, which Mr. CRANE owes, not only to himself, but to all patentees, and to the public, to enforce his rights. For reasons assigned in our Notice to Correspondents, we are precluded from entering at length on the question; but shall next week, when a supplementary number will afford space to resume the subject.

It is with pleasure we announce the formation of a society having for its object the protection of patents. The infringements which are of such oft occurrence—the inability, in many instances, of parties to incur the expense attendant on the proceedings necessary to secure their rights—and the well-known fact, that, in nine cases out of ten, inventions for which patents are taken are those by practical men of talent, but without means to avail themselves of their abilities, unless aid be furnished them—afford sufficient evidence of the value of such an institution. We are given to understand that Lord BROUHAM has been, or will be, invited to become the patron of the society. A considerable sum has already been subscribed. We hope to be able, in our next, to say more on the subject.

We have received a copy of the "Review of the Administration of the Directors of the Durham County Coal Company," emanating from Mr. MATTHIAS DUNN, who, under the new régime, was appointed as the viewer, or manager, of their collieries (of whom it may be said, *en passant*, we know not one more honest or competent for the performance of the duties devolving upon the office), but who has been displaced by the reigning board of directors. It is not for us to canvass or examine into the causes to which such separation is attributable, inasmuch that we have before us but one side of the question presented, yet we cannot pass by unnoticed the review to which our attention is directed.

That the Durham County Coal Company originated in fraud all admit—that its property, if well managed, would make some return to the shareholders we conscientiously believe—and that the present direction are incompetent to the performance of the duties imposed upon them we apprehend is too apparent. It will be remembered that many months past, in advertizing to the change of administration, we stated that the "busy H's" were men of business, if not, as the world would call, honest, while those who displaced them had the character (which we believe them to have fully maintained) of honesty, but that they were *incompetent* as regards colliery operations, whether underground or at surface.

We have not space, on the present occasion, to enter into the minutiae of Mr. DUNN's review, which, with all due deference to that gentleman, we must say, is written in a style which is to be deprecated. We have already said that we believe the writer to be a man of ability, and well worthy the post he filled; but we regret he should lower himself from the station we would assign to him, by personalities—such as those in which he has indulged in the printed statement before us. We shall next week take the leading points of Mr. DUNN's "review;" there is much that is useful to be known, and it only affords another evidence of the way in which "things are done."

BENJ. VON BAEREN'S.—It will be observed, by the report under head of "Law Intelligence," that the application of the defendant, in the cause "the Queen v. Newall," has been refused. The case will, therefore, come on at an early day.

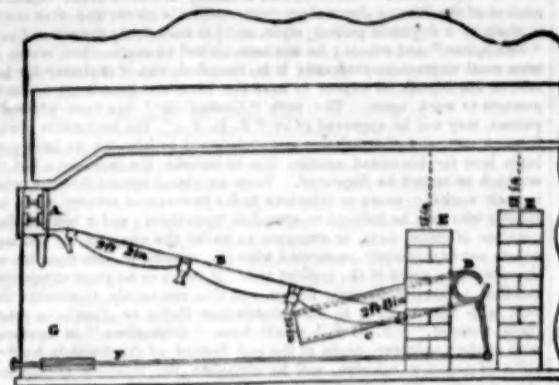
MEETINGS OF SCIENTIFIC BODIES.
IN THE ENSUING WEEK.

ASSOCIETY.	PLACE OF MEETING.	DAY.	HOUR.
Royal Asiatic	14, Grafton-street	Saturday	2 P.M.
Royal Botanical	Royal-park	Saturday	4 P.M.
Woolwich Medical	Exeter Hall	Saturday	8 P.M.
Statistical	40, Martin's-place	Monday	2 P.M.
Astronomical	South-court, Fleet-street	Monday	2 P.M.
Linnæan	Royal-society	Tuesday	2 P.M.
Horticultural	21, Regent-street	Tuesday	2 P.M.
Civil Engineers	10, Great George-street	Tuesday	2 P.M.
London Electrical	Adelaide-street	Tuesday	2 P.M.
Chemical	Society of Arts, Adelphi	Tuesday	2 P.M.
Society of Arts	Adelphi	Wednesday	2 P

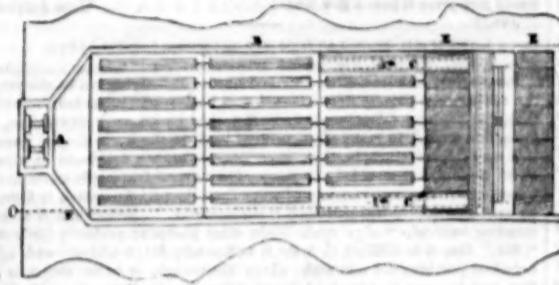
PREVENTION OF SMOKE AND SAVING OF FUEL.

We last week adverted to the patent of Mr. Joseph Williams, or rather that secured under the name of André Kurz, having for its object the decomposition of the gases, and prevention or consumption of smoke, and now propose entering into a description of the furnace as presented to us in the *Urgent* Government steam-vessel, now lying at her Majesty's Dockyard at Woolwich, the information we have acquired being derived from Mr. Joseph Williams, Captain Emerson, and Mr. Elliot, the engineer; and which, to render more clear to those who are unacquainted with this description of furnace or machinery, as also the difference existing between the patent of Mr. J. Williams (Kurtz) and Mr. C. W. Williams, we have illustrated by diagrams:

Longitudinal section of furnace.



Ground plan of furnace.



DESCRIPTION.

A—Furnace door, or charging place.
B—Continuity of furnace-bars, entire length 6 ft. 6 in.
C—Air passage, or flue; eight inches by two inches interior, whereby the air from the ash-pit becomes heated, and passes into the space between the fire and hind departments of the bridge—metal one inch.
D—The valve acted upon by lever (F) for regulating the distribution of air to furnace.
E—The brickwork of bridge, nine inches each in thickness; the intermediate space of nine inches being for the passage of the heated air from C.
F—The lever, or rod, for regulating the admission of air by means of the valve.
G—The ash-pit.

On referring to the above plan and section, as taken from actual measurement and observation, made on a personal inquiry last week, it will be observed, that the *decomposition* of the bars, from charging place to the bridge, is at an angle of about twenty degrees, the bars being 2 ft. 2 in. in length—thus making the whole length, or range, of the furnace 6 ft. 6 in. to the bridge. The mode of introducing the heated air is shown at C, where a pipe, or passage, being eight inches in depth by two in width (one inch metal), is placed on either side the furnace, thereby displacing the furnace bars, as shown in the ground plan—thus conveying the air from the ash-pit through these heated pipes to the bridge, the pipe, or passage, being at about a like angle of inclination, crossing the bars in its admission of the air. The air from the ash-pit, thus traversing through the heated passage (C), is allowed to escape, or is rather regulated in its emission by the valve (D), which, passing up the vacuum formed between the front and hind portion of the bridge, at once commingles with the gases. The lever (F) represented shows the means by which the valve is regulated, as to the admission or dispersion of air.

Having thus described the modification of the patent as applied to the *Urgent*, the question which arises is, how far it answers the purpose? and, moreover, with reference to the discussion in our columns, whether such is an infringement on the patent of Mr. C. W. Williams? We will, then, first state the result of our inquiries as regards the process or invention applied to the *Urgent*, and then proceed to inquire how far the two patents have reference to each other. It appears, then, from the inquiries instituted, that the *Urgent* during the past thirteen months, saved about 600 tons of coal in 111 trips, the usual quantity used before the introduction of the patent being forty-five tons the trip, while, since the application of Mr. Joseph Williams's (Kurtz) patent, the consumption of fuel has been reduced one-ninth, or five tons per trip. It is stated that during the first seven months, a saving of 400 tons 6 cwt. was effected; but, as the Government does not allow an engineer's log to be kept (we presume on the score of economy) for the past six months, there is no documentary evidence to refer to, therefore we have taken the oral evidence of the engineer, from which we gather that the saving during the entire period was that already mentioned—about 10 to 11 per cent. With reference to the question, as regards the difference, if any, existing between the patent of Mr. C. W. Williams and that of Mr. Joseph Williams (for, as regards his claims on, or differences with, Mr. André Kurz, it is no matter for us to consider), it is right that we should direct attention to the prominent features which present themselves in the two respective patents, specifications of both of which are now before us.

Mr. C. W. Williams's patent has for its object the dissemination of atmospheric, or cold air, in slugs, or jets, whereby, diffusing itself with the gases, a combination takes place, which has the effect of economising fuel, and the prevention of smoke. Mr. C. W. Williams claiming the admission of atmospheric air through whatever apertures he might think fit to adopt at any part of the flame bed, or before or aft the bridge, so that the air so admitted is in minute particles, so as to mingle with the gases. Mr. Joseph Williams's (Kurtz) patent appears to us to be so far different, that, instead of diffusing the cold air through the slugs, valves, or apertures, contemplated by Mr. C. W. Williams, he at once introduces hot air (the heat being generated in its passage from the ash-pit to the "split bridge"), through two passages already described, whereby it commingles with the gases, or comes in contact with the flame—Mr. Joseph Williams using, however, a valve for regulating the quantity of hot air required, as shown in the diagrams; and, as we are further given to understand, the space between the two portions of the bridge being contracted at the upper part, so as better to regulate its passage.

Thus, it would appear that while Mr. C. W. Williams introduces cold air through small apertures by way of jets, Mr. Joseph Williams avails himself of hot air in excess, merely regulating the heated air by the valve already mentioned. We have referred to the specification and original drawings appended to the patent of Mr. A. Kurz, and we are bound to state that there is a dissimilarity between the drawings and the diagrams here given, inasmuch that Mr. Kurz does not show any valve or lever as above described, nor is the angle at which his bars are placed in a like position. This is, however, a question for patentees, and not for us to discuss. We have given the result of our observations on Mr. Joseph Williams's patent or application of heated air to the boilers of the *Urgent*, and shall be glad to be set right, if that we have, in the slightest respect, committed any error. We do not interfere with the question between Mr. Joseph Williams and Mr. Kurz, while at the same time we cannot but express our opinion that it is in excess on the one or other, if not both, to explain their relative positions, and not allow paragraphs to appear, reflecting on the character of one of the parties, and much to be allowed to pass unnoticed and unnoticed. We presume Mr. Joseph Williams, if not Mr. C. W. Williams, will notice this article in our next, and, wishing to have the subject well noticed, we leave the question, with that of Mr. Billingsley's application, or infringement, until an early Number, when we hope this long litigated question will be brought to a close.

NOXIES FURNACE.—During the recent Sessions of the Peace for the county of Durham, an indictment was preferred before the grand jury, charging Messrs. Cookson and Co.'s Alkali Works, near South Shields, with being a nuisance to the inhabitants of that town. The grand jury returned a true bill, so that the case will probably come on for trial next session.—[In our next we shall give a description of Messrs. Hodder and Hodder's ingenious invention, with drawing and specification, by the adoption of which the injurious effects arising from alkali, metallic, and other chemical works will be effectively removed.]

ORIGINAL CORRESPONDENCE.

RELATIVE MERITS OF THE HOT AND COLD-BLAST PROCESS.

TO THE EDITOR OF THE MINING JOURNAL.

SIR.—I am invited by Mr. George Crane, in your last publication, to provide one hundred and fifty pounds (so offering to furnish the like sum, instead of fifty pounds, his first subscription) towards an inquiry which the Society of Civil Engineers is to be requested to undertake into the relative merits of iron made with hot and cold-blast and anthracite coal; and Mr. Crane proposes that he and the agents of the Ystalyfera Company shall have free access to these works during the investigation, offering the same admission to the Yniseddwn Works to me and the agents of the Ystalyfera Company.

I am sensible of the importance a special inquiry made by the Society of Civil Engineers would give to anthracite iron, and I have so many accumulating proofs of the surpassing merits of that made by cold-blast at the Ystalyfera Works, that my conviction is, that any and every fair inquiry must enhance its value in public estimation. Whilst, therefore, with the thrift induced by pinching times, I feel one hundred and fifty pounds to be a large sum only to be expended on an object of decided utility, and whilst I have no intention to set up my purse against Mr. Crane's, or to go on offering increasing stakes with him as a proof of confidence in the iron I manufacture, yet I am willing to contribute the large sum named, for the purpose and in the manner stated; or, as an amendment, to agree that he shall pay the whole expenses whose iron is found the weakest.

I suppose Mr. Crane—as he has so shortly dispensed with the important aid of Messrs. Mushet and Fairbairn, to whom we can hardly refer, well warranted in thinking that the Society of Civil Engineers will undertake the inquiry into the properties of anthracite iron; yet I cannot but regret that with such a competent tribunal, what was first started by you, and to which my subscription was given, as a general examination into all the varieties of iron made in this country, should have become a mere question between the Yniseddwn and Ystalyfera Iron Companies' manufacture. I fear, also—considering the close neighbourhood of these rival companies, well known not to be on terms of cordiality—the proposed inquiry, so limited and contracted, can hardly be carried through with temper. I think it right to express so much, lest public expectation should be disappointed in the result.

In the agent I have thus given to Mr. Crane's second proposal, I have acted in the belief that there must be some mistake in the intimation I have received from him, since I last addressed you, that he had instructed his solicitors to commence immediate proceedings at law for the recovery from my partners and self of the profits and benefits of our former use of the hot-blast process. From the fair and candid spirit of Mr. Crane's letter, I am sure he would neither make a public challenge, which he knew I was precluded by legal proceedings of his own from accepting, nor would seek access to these works under any pretence whilst intending to establish a case at law against us. If, however, Mr. Crane has inadvertently overlooked the circumstance, he will reluctantly allude to, and if the very subject, he proposes should be investigated as a matter of science, is about to be inquired into in a court of law, I can only regret such an unfortunate oversight on his part; as, on reflection, he must feel how incompatible are the circumstances, and how necessary it is for me to see that the legal position and interests of the Ystalyfera Iron Company are provided for, before I throw open these works, as suggested by him. It is not a very improbable contingency, that a natural bias might convert the agents of the Yniseddwn Iron Company into not perhaps quite impartial witnesses in a court of law. Mr. Crane will, therefore, doubtless direct his solicitors to give our legal advisers the necessary assurances; and, relieved from this question as a matter of law, I shall eagerly enter into it as a matter of scientific investigation and of legitimate and laudable competition. If, on the contrary, Mr. Crane contemplates a legal process against us, I consider his conduct contradictory, and shall decline pursuing this subject further in its present shape.

I am glad, in conformity with your wish to be informed how our new large furnace works, to say, that, from present appearances, the increased dimensions promise to be of material advantage, and that, with my cold-blast process, furnaces of the largest size may be worked with the anthracite coal alone.

J. P. BUNN.

Ystalyfera Iron-Works, Swansea, Jan. 10.

BLACK-BAND IN STAFFORDSHIRE.

TO THE EDITOR OF THE MINING JOURNAL.

SIR.—I have received the specimens, raw and roasted, of the ironstone forwarded to you by your Staffordshire correspondent, and which you have thought proper to refer to me for my opinion. I have no hesitation in pronouncing them to be black-band, or carboniferous ironstone, identical in every respect with the Scotch, and of equal quality. This is not, however, the only black-band that has passed through my hands from Staffordshire. It is found on Lord Lichfield's property, in some mining ground belonging to Messrs. Thornycroft, and also near Newcastle, in North Staffordshire. I expect to be able to send you this week the result of some experiments made with the Beaufort black-bands, Nos. 1, 2, and 3.

Coleford, Jan. 11.

DAVID MUSHET.

BLACK-BAND IRONSTONE.

TO THE EDITOR OF THE MINING JOURNAL.

SIR.—In a recent Number of your Journal the following concise and emphatic communication appeared, signed J. and C. Bailey:—

"Sir.—We beg leave to set Mr. David Mushet right respecting the discovery of the black band ironstone at Nantyglo and Beaufort Iron Works. We have worked it at Nantyglo for the last twenty to twenty-five years—at Beaufort since Aug. 1866."

Now, on examination, I find that the vein thus worked at Nantyglo consists merely of common argillaceous ironstone, which, consequently, Messrs. Bailey have mistaken for the carboniferous black-band. With this remark, I leave it to your intelligent readers to decide how far Messrs. Bailey are qualified "to set Mr. D. Mushet right."

ROBERT MUSHET.

Jan. 10.

COLD AND HOT-BLAST IRON.

TO THE EDITOR OF THE MINING JOURNAL.

SIR.—I have had my attention directed to a long letter in your Journal of the 31st ult., signed Henry Hartop, and I suppose written by that zealous individual. I pretend not to enter into the merits of the question at issue between Messrs. Graham and Co. and himself, but if all his other statements are of equal value with the last half-dozen lines in that letter, there is not, I think, much dependence to be placed on his experiments. He says—"The other (letter) from a person who had to do with contracting with Messrs. Graham and Co. for supplying a very great quantity of castings and other iron-work at a very low price, after which, the least he could do under the circumstances, was, to say that such castings and iron were of good quality, or what would the original contractors have said?"

In reply to this silly insinuation, allow me to say to him, that I am not a person who had to do with contracting with, but was simply the agent for the original contractor of the works I named in my letter to Messrs. Graham and Co. (and which I observe is published in the *Mining Journal* of the 7th instant). I never contracted with Messrs. Graham for "a large quantity of castings at a low price," nor for any price at all. I never had any of their castings but waggon-wheels, barrow-wheels, and such small articles; I never had any other iron-work at a very low price from them, but generally paid them a higher price than I could have procured the articles elsewhere, just because I considered their iron better than I could get elsewhere, and, consequently, cheaper in the end; I paid them 12d. per ton for iron rails for temporary purposes, and 1d. for a large quantity of iron 2½ inches diameter. Surely, Mr. Hartop will not call these very low prices, and, in fact, the only fault I ever had to find with the iron I got from Milton Iron Works, was the high price which I thought they charged for it. Allow me to say, that I have no interest, and that I had no interest in the matter in dispute; hot and cold-blast are alike indifferent to me, but I cannot allow a man of Mr. Hartop's stamp to impugn my motives, or question my veracity, without an attempt to defend myself.

SAMUEL HORN.

Louds, Jan. 11.

COLD AND HOT-BLAST IRON.

TO THE EDITOR OF THE MINING JOURNAL.

SIR.—"Alpha," in his letter to you of the 20th of November, agrees with me, that the experiments of any individuals upon their own iron, as compared with that of others, are of no worth, and ought not to be published with a view to settling this question; and, by the same rule, I should now doubt all experiments made on iron manufactured for the purpose of being experimented upon with that view. If "Alpha" ever read my paper, in your Journal of the 6th of August, he seems to have either forgotten or overlooked the very important fact, that all the experiments therein named,

except the last, were not mine, but those of gentlemen, not ironmakers; and, therefore, his comparison between Messrs. Graham and Co. and myself stands for nothing, and will, I think, do away with all cause for further trials on the subject, and particularly when it is remembered that, on a fourteen years' trial, the difference of price in the market, between cold and hot-blast iron, cannot but stamp the new process as a total failure.

If "Alpha" will refer to my paper of the 24 of August, he will there find an abundant reason why the Elsecar iron should not have been compared with that from Milton, in Mr. Fairbairn's first table; and if he looks at that gentleman's last tabular statement in the column—of all others by far the most important to the public of its whole contents—namely, *the power to resist impact*—it will be seen, that while the Elsecar cold-blast iron is one of the two highest in that column—viz., 992 lbs., the Milton hot-blast iron, made with the same coal, ironstone, and limestone, is only 538 lbs., or the lowest but four of the forty-nine experiments therein named; when this is seen, probably the observation of man's prejudice carrying them the "whole hog," in this instance may not be applicable as the "whole hog."

We are next referred, as a proof that hot-blast iron may be used for works of great strength, to the beautiful bridge that carries the Midland Counties Railway over the Trent, made at the Butterley Works, of hot-blast iron; it is, however, equally notorious that bridges can be made beautiful at those works of hot-blast iron, but beauty and strength are two different questions; and it will not be denied, that a bridge may be made strong enough of hot-blast iron, if you use plenty of it, and go also to the additional expense of making the masonry strong enough to support it; but the original saving of 12s. or 15s. per ton on the iron will be very small, as compared with such very considerable extra costs; and although the abutments of the bridge in question cannot speak, the one on the Sawley side of the river will show much to those curious in such matters. In calling attention to the aqueduct which carries the Aire and Calder Canal across the River Calder, at Stanley Ferry, "Alpha" has forestalled me of a rich specimen of a large work on my side the question; and an examination will show him a very considerable number of flanges and castings broken under the operation of putting it together; and, as a large portion of the flanges are immersed in the water of the canal, probably Mr. Horn (agent and manager to the *original contractor* for the work from the Aire and Calder Company) may be able to speak to what cannot be seen; indeed, it would only have been candid in Mr. Horn if he had alluded more particularly to this aqueduct in his testimonial of the good quality of the Milton hot-blast iron. The bridge and massive dock gates at Goods I have not seen in their places, and do not doubt their doing their work, although it may be with the help of an excessive quantity of iron and a proportionate quantity of masonry; at all events, if public opinion may be trusted in such an important matter, the sub-contractor made no little sacrifice to get quit of so great a weight of the valuable produce of his hot-blast. If "Alpha's" thirst for information on this subject should take him to inspect the aqueduct in question, he cannot do better than visit Leeds, and, on calling at the iron-works there, he will, on inquiry, find that the iron portion, having originally been the produce of hot-blast, the engine, with every wheel, plummer-block, and shaft, has been broken, and replaced by others of cold-blast iron—the expense of doing which has, I should think, been, with their attendant hindrances, almost incalculable; and, indeed, if in this neighbourhood, and "Alpha" should wish for further proof on this subject, he cannot do better than call at the Milton Iron Works, where, if truly informed, he will find that, some time ago, on accidentally breaking the driving shaft of their large forge hammer, after having been some years at work, five others were cast, one inch larger in diameter, of their own hot-blast iron, all of which broke in succession within eight weeks; at the end of which time one was made of cold-blast iron, and stood its work well. "Alpha" will not, then, say that hot-blast iron was not found wanting; and where is the honor in the ironmaster, who, for a saving of 12s. or 15s. per ton, reduces the value of his product 30s. per ton in the market? With all these facts looking us full in the face, will "Alpha" yet say that iron is not deteriorated by the use of heated air?

I am glad of James Beaumont Neilson having "Alpha's" best wishes, and I take this opportunity of tendering mine also, but not as the discoverer of the use of heated air in the blast-furnace; that, if I have not long been misinformed, belongs to the name of Bettfield—a name of long and high standing in the British iron trade, and whose great merit, I think, lay in his abandoning his new scheme as soon as it was found to injure the quality of his produce; the effect of which judicious abandonment, I trust, Mr. Bettfield has long and profitably enjoyed, as I find his pig-iron is now selling for 57s. per ton in the market, and hot-blast iron at 27s. 6d. per ton. Should I have failed to convince any of your readers as to the very abundant reasons for this difference in value, I must beg of such in read over, with attention, the very practical and independent letter of Stephen Kitch, in your Journal of the 24th of last month.

"Scutus's" letter of the 5th December, I think, so effectually answered by "A Keeper's" letter, dated Sheffield, 13th December, as to leave little for me to say, except I think it probable that, unless either his additions or his furnace is better looked after, it may prove all the worse for the young "Scutus's."

"Omega's" letter, of the 14th of December, next claims my attention, and, I must say, that our conclusions are pretty much in unison; as regards his disagreeing with you on the *trial commission*, I think that day now gone by (except as to anthracite iron), and that, in all future trials, those with the least principle will stand the best chance—a state of things which should not be. You, Sir, think "Omega" is an ironmaster, and of which I have little doubt; I do not, however, comprehend his meaning as to civil engineers and gas directors equalling between hot and cold-blast, unless it is on his discovering that the too common and disreputable trick is drawing fast to its close, of ironmakers and founders, under the influence of a bribe to engineers and directors, being able to get pipes and other castings received made of hot-blast iron, under a contract, in which cold-blast iron is expressly stipulated for. "Omega" may depend upon it, the question is become too well understood and too serious for that sort of thing to go on much longer. There cannot be a doubt as to the degree of credit being given to all productions, in proportion to the standing in society of their authors—and it is on that ground I form my opinion on such questions as I think it worth my while to give myself any trouble about; and as to the particular question now under discussion, if "Omega" will give himself the trouble, he will see in my letter, in your last week's Journal, that my opinion on that subject has, at least, been built on a good foundation, inasmuch as the results favourable to cold-blast iron are from the experiments of five different parties, of undoubted credit, and altogether independent of this question, against one experiment made by parties on their own iron, and who, to say the least of it, are very very much interested in the result; and I do not think the cause of hot-blast iron will be very much advanced by any of its advocates (however highly they may think of themselves) descending to call names, that being well understood as the most decided symptom of the last degree of weakness in argument on all subjects. I can, with great safety and satisfaction to myself, leave it to your readers and the public to supply the only name applicable to one who can stoop to promulgate abuse under a fictitious signature; I should, Sir, have been sorry to have found my paper or your columns with it; and, I must add, I do not think you justifiable in having given room for "Omega's" letter under such circumstances. *Boroughorough-hall, Rotherham, Jan. 2.* HAWK HANSON.

RELATIVE PROPERTIES OF HOT AND COLD BLAST IRON.

TO THE EDITOR OF THE MINING JOURNAL.

SIR.—In your last, I perceive a letter from Mr. Henry Hartop, on hot and cold-blast iron, wherein is stated the strength of Finsley cold-blast, and Plaskynstone hot-blast iron, and stating they were made in the same coal-field, and of the same materials, which, I beg to say, is not the case. The coal and ironstone got at Plaskynstone, and used in making iron there, not being at the Finsley at all. Being a resident near the Finsley, I can prove that they never used any of the materials used at Plaskynstone, but it is probable Mr. Hartop is led by the experiments made by Mr. Fairbairn on fifty different irons, and in all the cases mentioned, the iron were sent for that purpose by their respective makers. Now, as regards the Plaskynstone iron, it was sent to Manchester for quite a different purpose; as I sent 600 tons of a peculiar iron to E. Buckley, Esq., of Manchester, which he sent to Plaskynstone, which he, as well as myself, supposed that the British Association would be able to inform us what were the component parts of that iron; and as I gave to Mr. Buckley the process by which the iron was made, we were desirous to know what caused it to be of that peculiar property, but what was my surprise, when I had the use of ex-

